THE COURT OF APPEAL

UNAPPROVED
NO REDACTION NEEDED

Record Number: 2021/63
High Court Record Number: 2017/7648P

Noonan J.

Collins J.

Binchy J.

BETWEEN/

PATRICK DUFFY

PLAINTIFF/RESPONDENT

-AND-

BRENDAN MCGEE T/A MCGEE INSULATION SERVICES
AND GMS INSULATIONS LIMITED

DEFENDANTS/APPELLANT

Record Number: 2021/64
High Court Record Number: 2017/649P

BETWEEN/

ANITA DUFFY

PLAINTIFF/RESPONDENT

-AND-

BRENDAN MCGEE T/A MCGEE INSULATION SERVICES
AND GMS INSULATIONS LIMITED

DEFENDANTS/APPELLANT

JUDGMENT of Mr. Justice Noonan delivered on the 7 day of November, 2022

1. In these personal injuries appeals, the plaintiffs, Mr. and Mrs. Duffy, claim to have suffered severe personal injuries as a result of exposure to toxic chemicals present in their home during and after the installation of spray foam insulation. The issues of negligence, causation and quantum were all very much in issue in the High Court and again in these appeals. One of the central features of the appeals relates to expert evidence and more generally, the duties of experts and how the court should treat their evidence.

2. These appeals are brought by the first defendant only, the claim against the second defendant having been dismissed at the conclusion of the evidence. That dismissal is not appealed. For convenience, I shall refer to the remaining defendant/appellant throughout as Mr. McGee or the defendant.

Facts

3. The facts are set out in detail in the judgment of the High Court (Cross J.) delivered in both cases on the 4th December, 2020, so that a summary will suffice here. Mr. Duffy was born on the 11th April, 1975 and Mrs. Duffy on the 9th June, 1977. They were married on the 25th June, 2005 and their daughter, Charlie Jo, was born in August 2013. At the relevant time, they lived in their family home at Annagry, County Donegal. The house is described by the trial judge as a fine house built through direct labour, primarily by Mr. Duffy, his family and friends. The Duffy's took great pride in their house which is described as being one and a half stories of dormer type construction, with four bedrooms, one on the ground floor, three upstairs, a living room and kitchen, sitting room and a dining room/sunroom off

the kitchen. After the house was completed, they subsequently constructed a large garage to the side of the house.

4. Mr. Duffy worked as a delivery man for a local hygiene product company. The judge said he was an excellent worker, never missed a day and was highly valued by his employer, who gave evidence. Up to the time of Charlie Jo's birth, Mrs. Duffy worked as a bookkeeper in a solicitors' office but after Charlie Jo's birth, she suffered from post-natal depression and gave up work. While she appears to have been certified as unfit for work thereafter, her evidence, which was disputed, was that she intended to return to employment when Charlie Jo started school.

5. It would appear that when the house was originally constructed, the insulation, particularly in the sunroom and the attic roof space, consisted of fibreglass wool. In January 2016, the Duffy's decided to upgrade the insulation in the house with a product called Icynene, which they had researched on the internet. Icynene is a proprietary product of a Canadian company of the same name and is a form of spray polyurethane foam (SPF). Icynene is composed of two constituents known as Compound A and Compound B. Compound A consists of isocyanate, a highly toxic chemical which caused the deaths of thousands of people in the Bhopal disaster of 1984.

6. Compound B comprises a large number of unspecified chemicals which are also accepted to be toxic. Both compounds are stored separately in liquid form and are mixed in a 1:1 ratio in the spray gun applicator and are then sprayed on to the relevant wall or roof surface, immediately combining to form a foam which cures and hardens over a period of time, providing insulation. Because of the hazardous nature of these chemicals, the person carrying out the spraying must wear a fully enclosing protective suit with breathing apparatus.

7. The first defendant, Mr. McGee, a local insulation contractor and supplier of Icynene, was contacted by the Duffys who were seeking a quotation for insulating their house. The second defendant is the Irish distributor of Icynene.

8. In January 2016, Mr. McGee called to the Duffys' house to discuss the job and give them a quotation. Mr. McGee took some measurements for the purpose of pricing the job and gave a figure which the Duffys accepted. There was a dispute between the parties as to what was said at that meeting about safety precautions which the judge dealt with in his judgment.

9. The job was scheduled to take place over two days on Thursday and Friday the 18th and 19th February, 2016. In the course of discussing insulating the sunroom, Mr. McGee told Mr. Duffy that he, Mr. Duffy, would need to engage a specialised contractor to take down the ceiling and the old fibreglass insulation and subsequently reinstate it after the foam had been sprayed. After the meeting, Mr. Duffy contacted a local building contractor, Mr. Doherty, for the purpose of carrying out this work.

10. On the morning of the 18th February, Mr. Doherty arrived at the Duffy's house with two workmen to commence the work in the sunroom. Mr. McGee then arrived and his two workmen separately with their van and equipment. At that stage Mr. and Mrs. Duffy and Charlie Jo were present in the house. Shortly afterwards, Mr. Duffy left for work and Mr. McGee also left to price other jobs. There was a dispute between the parties as to whether Mrs. Duffy and Charlie Jo also left the house for the entire day while the spraying was going on or whether they were in fact present throughout save for a short period when Mrs. Duffy visited her mother who lived nearby.

11. Mr. Doherty's workmen commenced by putting up plastic sheeting to cover the door between the sunroom and the kitchen so that the dust caused by their work would not spread

through the house. While Mr. Doherty's men were working in the sunroom, Mr. McGee's men went into the attic to remove the fibreglass insulation from the roof which they relocated onto the floor to provide some extra insulation. It was also necessary to cut three openings approximately two feet square in the ceilings upstairs in order to gain access to dormer roof spaces that were enclosed and not part of the main attic.

12. It would appear from the judge's findings that sometime during the course of the morning, Mrs. Duffy and Charlie Jo left the house to visit Mrs. Duffy's mother and when she was out of the house, Mr. McGee's men sprayed the foam in the sunroom. This appears to have only taken about 20 minutes and Mrs. Duffy and Charlie Jo returned to the house when Mr. McGee's workmen had moved upstairs to commence spraying of the attic. Three openings were cut in the upstairs ceiling, one in the master bedroom, one in the dormer hallway and one in another bedroom. Mrs. Duffy and Charlie Jo spent the day in the kitchen save for the short visit to Mrs. Duffy's mother.

13. Mr. Duffy returned home at around 5pm when Mr. McGee's men were finishing up. Mr. Duffy said that he met Mr. McGee that evening although Mr. McGee disagreed with this. Mr. Duffy's evidence was that following discussion with Mr. McGee, he asked Mr. Doherty to repair the openings upstairs in the ceiling on the following day. Mr. Duffy's evidence was that he detected a strong smell in the house when he returned and Mr. McGee advised him to leave the windows open, which he did until it became too cold and he closed them.

14. That night, Mr. Duffy slept in the master bedroom and Mrs. Duffy slept with Charlie Jo, who had trouble settling on her own, in another bedroom where the roof light could not be opened and a hole had been cut in the ceiling which remained open. A similar hole remained open in the master bedroom where Mr. Duffy slept.

15. On the following morning, when Mr. and Mrs. Duffy and Charlie Jo awoke, they had respiratory symptoms which appeared initially to resemble a cold. Ultimately, Mr. and Mrs. Duffy both went on to develop Reactive Airways Dysfunction Syndrome (RADS) diagnosed by their consultant respiratory physician, Professor Conor Burke. Professor Burke described both plaintiffs as being amongst the most severe cases of RADS he had ever encountered and within the top 1% in terms of severity. His evidence, which was strongly challenged, was that the probable cause of both plaintiffs' condition was exposure to isocyanate. Professor Burke's view was that in the case of both plaintiffs, the condition is severely debilitating, lifelong and cannot be treated.

16. There is no dispute about the fact that both plaintiffs suffer from RADS. Rather, the claims turn on negligence and causation. The plaintiffs allege that Mr. McGee, his servants or agents, were negligent in failing to ensure that they were not present in the house while the spraying operation was ongoing and for a period of at least two hours thereafter. That is the minimum period required in the presence of a specified level of ventilation, but the plaintiffs alleged further that such ventilation was not in fact provided by Mr. McGee and consequently, the minimum period for which they should have been advised to remain out of the house was 24 hours post cessation of spraying. Mr. McGee denies that there was any negligence on his part in relation to ventilation but moreover, a central feature of his defence is that isocyanates could not have been responsible for causing the plaintiff's injuries. He relies heavily in that regard on the evidence of an expert toxicologist, Dr. George Thompson.

Evidence in the High Court

17. On behalf of the plaintiffs, liability evidence was given by Mr. Ciaran Gallagher, consulting engineer. Evidence on causation was given by Professor Burke. Documentary evidence was also introduced consisting of documents issued by Icynene Inc. concerned with

safety aspects of Icynene. These documents were addressed to various parties including installers and homeowners and were updated and revised from time to time. They included various iterations of a document described as a safety data sheet which contained the following:

> "Sprayers, sprayer helpers, and anyone else present during spraying or within 24 hours after spraying is complete: You must wear proper Personal Protective Equipment (PPE) at all times during spray, including full-body coverage, chemical-protective clothing and a NIOSH – certified respirator with fresh air supply. While spraying and for 24 hours after spraying is completed, no one must be allowed within 50 feet of the spray foam without wearing this type of PPE at all times. Adequate active, negative pressure ventilation (exhaust fans) of the job site must be in place during spray and for 24 hours after spray is complete.
>
> Independent studies indicate that with 24 hours active ventilation after spraying is completed, Icynene spray foam insulation is safely cured." (Emphasis in original)

18. The same page contains a large box in bold type with a warning triangle headed "WARNING" and stating "wear proper personal protective equipment at all times on premises during spraying and within 24 hours after spray is complete."

19. In the days following the installation of the SPF, Charlie Jo also became unwell and was brought to hospital where the doctors enquired as to whether she had been exposed to any chemicals. Mr. Duffy contacted Mr. McGee seeking this information and Mr. McGee furnished him with a safety document he had obtained, evidently from the internet, which provided for the 24 hour period indicated above. Based on this and his own researches into the matter, Mr. Gallagher when giving evidence was also under the impression that the 24 hour exclusion period applied.

20. However, in the course of the evidence, it emerged that some time in late summer 2015, a new form of Icynene became available with what was described as a low VOC formulation which significantly reduced the exclusion time from the spray area. New health and safety advice issued by Icynene Inc. in January 2016 stated:

> "For installations of low VOC products (Icynene Classic and Icynene Pro Seal), re-occupancy of the job site is permitted after two hours provided that the rate of air exchange during spraying and for two hours thereafter equals or exceeds 40 Air Changes per Hour (ACH)."

Again, a box with a warning triangle appears on the same page containing the words "WARNING" and, beside a diagram of a person highlighting the airway and lungs, appear the words "Stay out of premises while foam is being sprayed and for two hours after spraying is complete for applications of low VOC Icynene classic and Icynene Pro Seal only with min. 40 ACH ventilation."

21. The issue of ventilation became a central feature of the case. It was agreed that in the absence of ventilation at the rate of at least 40 ACH, the 24 hour period still applied. While Mr. and Mrs. Duffy's recollection was that no mechanical ventilation was provided by Mr. McGee, Mr. McGee's evidence was that there was an extractor fan deployed during the spraying which was vented to the outside of the house. It was used first in the sunroom during spraying and then relocated upstairs while the roof spaces were being treated.

22. The plaintiffs' case was that Mr. McGee was negligent in failing to comply with the requirement for the Duffys to be out of the premises while spraying was in progress and for the requisite period thereafter, and further for failing to have in place the required level of mechanical ventilation to ensure that the 2 hour rather than the 24 hour period applied. While this was disputed, the evidence established that neither Mr. McGee nor his workmen had

carried out any calculations to establish if the requisite 40 ACH could be, or was in fact, achieved. There was also a dispute between the Duffys and Mr. McGee as to whether Mrs. Duffy and Charlie Jo were in fact present in the house during spraying.

23. However, I think it is fair to say that the central plank of Mr. McGee's defence rested upon the evidence of Dr. Thompson. The fundamental premise of that evidence was that isocyanates could not have been responsible for the plaintiffs' injuries because it is undetectable in the atmosphere 30 minutes after spraying. Therefore, whatever about Mrs. Duffy, Mr. Duffy could not conceivably have been exposed to isocyanates according to Dr. Thompson. The evidence of Professor Burke, on the other hand, was that the overwhelming likelihood was that the injuries to the plaintiff had been caused by isocyanate exposure. Dr. Thompson countered this with an alternative hypothesis, namely that the plaintiffs' injuries had in fact been caused by exposure to fibreglass dust from the old insulation that was removed to make way for Icynene.

24. There were certain features of Dr. Thompson's evidence which gave rise to concern on the part of the trial judge, as will appear. Dr. Thompson is an American expert who came into the case quite late in the day. He appears to have featured for the first time in Mr. McGee's S.I. 391 disclosure a few months prior to the commencement of the trial. Previously Mr. McGee's disclosure had listed only an Irish toxicologist, Dr O'Neill, who did not give evidence and whose report was withdrawn.

25. In advance of the trial, Dr. Thompson provided a lengthy and detailed report dated the 27th May, 2020 which was exchanged in the normal way. At the outset of his report, Dr. Thompson sets out a list of all the materials he reviewed. This included the medical reports from all parties and the pleadings. It did not include the reports of Mr. Gallagher, Dr. Tennyson, a scientist retained by the second defendant or Mr. McGee's previous

toxicologist, Dr. O'Neill The introduction to Dr. Thompson's report is broken down into three sections, the third of which is entitled "Doctrine of *Res Ipsa Loquitur*" in which he says:

> "Plaintiff intends to rely on inference alone to derive negligence and breach of duty by defendants, due to plaintiff's lack of direct evidence. This strategy goes directly against the foundational legal doctrine of 'innocent until proven guilty.' In the extreme, *res ipsa loquitur* allows plaintiff to make any claims against defendants without proof or substantiating direct evidence."

26. As already noted, the central plank of Mr. McGee's defence to the plaintiff's claim was Dr. Thompson's evidence that isocyanates are undetectable 30 minutes after spraying. At page 11 of his report, Dr. Thompson states (in bold type):

> "**Controlled studies detected airborne concentrations of isocyanates (0.005 – 0.025 ppm) in samples collected during a 15-minute spray application, but none at 30 – 90 minutes post spray (Wood, 2013). Another study could not detect isocyanates at 1, 2, and 4 hours after application (Wood, 2014).**"

27. Accordingly, the sources for Dr. Thompson's 30 minute proposition are two papers appended to his report, the author of which is identified in the papers as "Richard Wood CIH". As appears from Mr. Wood's description in the papers, "CIH" stands for Certified Industrial Hygienist. Mr. Wood's 2013 paper is entitled "CPI Ventilation Research Project Update". The study was commissioned by the Center for the Polyurethanes Industry Product Stewardship Committee which requested the CPI ventilation research taskforce to, *inter alia*, evaluate the effect of ventilation on airborne concentrations of SPF chemical components during application. As the title of the paper suggests, it is concerned with research into ventilation. It thus appears to be a study commissioned by the SPF industry for the industry

which was carried out by the industry. It is not therefore an independent peer reviewed study.

28. On the eighth page of the 2013 study, a paragraph entitled "Discussion – Results of Air Sampling at 10.4 ACH" appears and in that section, the following statement is to be to be found:

> "… Post spray concentrations for samples [of air] collected 30 minutes after application were below analytical detection MDI limits."

MDI is synonymous with isocyanates. Mr. Wood's 2014 paper, commissioned on the same basis as the 2013 paper, is entitled "CPI ventilation research project for estimating re-entry times for trade workers following application of three generic spray polyurethane foam formulations". Here again, as the title makes clear, this paper is concerned with, and forms part of, the industry research project into ventilation. On the fifth page of this paper, in a paragraph entitled "Results of Air Sampling – Generic High Pressure Medium Density Formulation", Mr. Wood says:

> "There were no measurable airborne concentrations of either 2.4 – MDI or 4.4 – MDI in the samples collected 1, 2 and 4 hours after application. MDI air solvent vapour has been shown to present during spray application of the generic medium density formulation, however, it was not detected after one hour following application."

29. Although the later paper refers to a 1 hour period, Dr. Thompson throughout concentrates on the 30 minute proposition. Despite the fact that the authority for this proposition relied upon by Dr. Thompson is two industry papers by Mr. Wood which are concerned with research into ventilation, Dr. Thompson's report hardly mentions ventilation at all. Further, he supports his views with the following statement at p. 15 of his report:

"In 10 previous SPF lawsuits in the US where I have served as an expert witness, no plaintiff has ever provided documentation that they were exposed to any isocyanates."

30. On page 30 of his report, in a section entitled "SPF Insulation in Plaintiff's Home", Dr. Thompson says:

"Requesting customers vacate the premises during installation in accordance with manufacturer recommendation is another standard precaution to assure customers are not exposed to the spray, nor off-gases from the curing SPF, and when this was explained to the plaintiff, Patrick responded that this would fit into their individual plans for the day of installation, as summarised in Table 7. This sequence of SPF installation events would have effectively prevented plaintiffs from experiencing exposure to SPF and its constituent chemicals, including isocyanates."

31. Table 7 is entitled "Safe Sequence of SPF Installation in the Duffy Home" and in this table, Dr. Thompson itemises a list of fourteen facts which appear to be designed to establish that the SPF was safely installed. The first was:

"1. Duffy's told to stay out of house until 6pm.

- Patrick said perfect … He doesn't finish until six, and
- Anita was going to Letterkenny for the day with her mother…

6. Anita and Charlie Jo left house at 9.30am on the 18th …

12. Brendan McGee picked up the payment at 5:00 on the 18th from Anita in Annagry.

- She had spent the day at her mother's house"

32. These statements are presented by Dr. Thompson as facts that establish that the plaintiffs were not exposed to isocyanates, despite him being aware that they were disputed by the plaintiffs. He was so aware because, when he wrote his report, he was in possession of the pleadings and all the medical reports including those of Professor Burke and Dr. Mohan, a consultant psychiatrist instructed on behalf of Mr. McGee.

33. Immediately following Table 7 in Dr. Thompson's report, Table 8 is entitled "Plaintiff Misrepresentations of the SPF Installation Process". This table contains three columns respectively entitled "Plaintiffs Complaints", "Independent Expert Observations" and "Standard/Actual Process". The first column is stated by Dr. Thompson to be derived from descriptions quoted in the report of Dr. Mohan. At one of the entries in the first column, Dr. Thompson notes that Mrs. Duffy had told Dr. Mohan the following:

> "She and her daughter were in the adjacent kitchen [when the SPF was being installed in the dining/sunroom]. Ms. Duffy can vividly recall feeding Charlie Jo, while the contractors were pumping 'the most toxin [*sic*] dangerous chemicals into the dining room' ".

34. Thus, if there was any doubt that the supposed facts set out in Table 7 were in dispute, Dr. Thompson himself resolves this in Table 8. Dr. Thompson's "independent expert observations" on the foregoing were as follows:

> (1) If they were present without protective equipment and exposed when the isocyanate mist was present, they would have both reacted quickly to its irritant property – no reaction reported.
>
> (2) The double plastic in the doorway precluded mist entry into kitchen.
>
> (3) Within 30 minutes, the isocyanates anywhere would have all reacted and disappeared, and there could be no exposure to them".

Immediately following Table 8, Dr. Thompson says the following:

> "In their numerous reports to their physicians, plaintiffs misrepresented the installation process and alleged they were exposed to isocyanates during the SPF Installation, as illustrated by complaints they made to Dr. Damian J. Mohan, Forensic Psychiatrist (Table 8)."

This is followed by Table 9 entitled "Duffy Contradictions for SPF Installation Timeline – 18 Feb 2016".

These "contradictions" are taken by Dr. Thompson from a report of Professor Heaney, the consultant respiratory physician retained on behalf of Mr. McGee. The first contradiction identified by Dr. Thompson is that at 8am, Mrs. Duffy said four workmen arrived for insulation work whereas Mr. Duffy said a crew of two operators arrived to install the insulation. There were of course four workmen present, two for Mr. McGee and two for Mr. Doherty, but all apparently dealing with insulation in some respect. Following Table 9, Dr. Thompson's report embarks on what purports to be a forensic analysis of what he saw as contradictions in the evidence which undermined the credibility of Mr. and Mrs. Duffy. At the end of this section, based on this analysis and his 30 minute proposition, Dr. Thompson says:

> "One must conclude that isocyanate could not have caused the injuries alleged by the plaintiffs."

35. On page 37 of his report, in what appears to be a further attempt to discredit the evidence of the plaintiffs, Dr. Thompson refers to what he considered to have been a failure on the part of the plaintiff to inform Professor Burke that there was a "second construction

project" ongoing in the Duffy house on the 18th February, 2016. He says (with underlining for emphasis):

> "The more critical omission of facts by plaintiffs to Professor Burke, and their other medical professionals, was that there was a second construction project at the Duffys' house that occurred simultaneously on 18 February 2016. This fact has not been mentioned in any of the reports and documents I have read."

Dr. Thompson continues the same theme in Table 10 which is entitled "Professor Burke False Exposure Assumptions (based upon parent falsehoods and misunderstood SPF installation chemistry)"

36. What is immediately striking about Table 10 is that it relates to Charlie Jo, who is not the subject of Dr. Thompson's report. This table is divided into two columns, the first "Professor Burke's Statements" and the second "Alternative Perspective". All the quotations referred to are taken from Professor Burke's report on Charlie Jo, who is the plaintiff in separate proceedings. The first quoted statement of Professor Burke is:

> "It is beyond doubt that Charlie Jo was exposed for the entire day of the installation and during this period she inhaled large quantities of isocyanate/polyurethane based chemicals.
>
> Charlie Jo's exposure was medically dangerous and breached all medical and engineering and industrial hygiene guidelines."

The "alternative perspective" offered by Dr. Thompson is again based on his insistence that the plaintiffs' version of events is untrue:

> “1. Charlie Jo and her mother left the house before the installation started and did not return until hours after it was completed”

Further down the same column, Dr. Thompson says:

> “Charlie Jo was never exposed to isocyanates! …
>
> 2. McGee told the Duffys that they would need to be out of the house, and they were…
>
> 4. The removal of the Duffys for the day along with engineering, closed system, and ventilation procedures used by McGee crew protected the Duffy’s from SPF constituent chemical exposures.”

37. On page 39 of his report, under the heading “Neurologic/Psychiatric Symptoms” Dr. Thompson, who is not a medical doctor, purports to offer medical opinion on Mrs. Duffy’s symptoms including:

> “She has a documented, long history of hypothyroidism, which is known to cause low mood and depression. These conditions represent pre-existing psychiatric and medical disorders at the time of the incident that contribute to the prolonged duration of her psychological disturbance.”

38. Mr. and Mrs. Duffy’s medical complaints include skin and eye irritation as a result of toxic chemical exposure, for which they were seen by Mr. Matt McHugh, consultant plastic surgeon. Under the heading “Local Irritation Symptoms”, Dr. Thompson feels competent to offer an opinion about this also:

> “Anita Duffy saw Dr. McHugh about her alleged skin redness, but his report only documented that she had skin redness on the day of her examination. Only the word

of the plaintiff indicated that the redness had persisted from 18 February 2016. However, defendant observed facial skin redness on the day he delivered his job quotation to the Duffys, prior to the SPF installation."

39. On page 46 of his report, consistent with what had gone before, Dr. Thompson again refers to the plaintiffs having "incorrectly reported to a number of doctors that Anita and Charlie Jo Duffy were home during the SPF spraying process (a fact strongly disputed by the defendant)…"

40. The final page of Dr. Thompson's report includes a "declaration of expert" which is detailed, and contains, *inter alia*, the following: -

"2. I understand that my primary duty is to assist the court with matters within my field of expertise, and that this duty overrides any obligation to the party by whom I am engaged, or the person who has paid, or is liable to pay, me.

3. I understand that in preparing this report, and/or giving evidence, I must maintain professional objectivity and impartiality at all times.

4. I have attempted to the best of my ability, in preparing this report, to be accurate and complete. I have mentioned all matters and facts which I regard as relevant to the opinions I have expressed. Any details from the literature, or other material which have been relied upon in making this report, are contained within the report…"

41. In his oral evidence, Dr. Thompson did not resile from his written report, and if anything doubled down on the allegation of dishonesty by the plaintiffs. At the conclusion of his direct evidence, Dr. Thompson was asked (Day 11, p. 36 – 37):

"44. Q. In summary then, Dr. Thompson, what as far as you are concerned does this case boil down to?

A. I guess I would say that using a term that is not scientific I would say deception. The claim here by the plaintiffs is that they were exposed to isocyanate. That is not true. They were never exposed to isocyanate. They claim that the mother and the daughter were in the house all day. I now understand that they have recanted that, so they weren't there. Even if they were there, they couldn't have been exposed to isocyanate as there only exists for 30 minutes in the spray area which they don't claim they were ever in the spray area. They claim that they were exposed over a long period of time and that precludes any knowledge or awareness or frankly in any of the documents I have read in this case about SPF chemistry. They couldn't have been there for a long period of time. I guess lastly the deception that I think really affects it a great deal, well, the two that are critical is that they said they were in the house, and they weren't, and the second one was that they didn't tell anybody that there was a second project …"

42. As noted previously, the second project that Dr. Thompson alleges that the plaintiffs told nobody about was the work being undertaken by Mr. Doherty's workmen to take down the ceiling in the sunroom, which was undertaken not only with the knowledge of Mr. McGee, but on his advice. Dr. Thompson was cross-examined about the second "deception" (on Day 12, p.12) as follows:

"34 Q. Dr. Thompson, the evidence the court has heard included evidence that this plaintiff Anita Duffy had returned to the home by 10:30 and that she was there all day. That has been the evidence of the court as heard. If indeed that was true and

she was in the home all day, would that in your view be an egregious breach of duty and compliance with the manufacturer's controls?

A. Well, first of all, I don't believe that she was in the home all day. First of all, her husband televised (*sic*), as I have in my report, that she left the home and went to visit her mother. The second thing is that the installer defendant has indicated to me that the installers, so the people working in the home, didn't see her all day and they certainly would have heard the child playing if they were there …

35. Q. If the court accepts Mrs. Duffy's evidence on that and if the court accepts Mr. Brendan Doherty's evidence that he saw Charlie Jo there during the day, if the court accepts all of that evidence and the evidence that the court then is faced with is that Mrs. Duffy was there during the spraying process, what do you say about that?

A. I would say that that is a contradiction to the data that I have in my report because that.

Mr. Justice Cross: I think, Dr. Thompson, you are asked to assume that it is correct that they were there, what is your opinion as to the rights and wrongs of them being there?

A. The opinion of the rights and wrongs of being left there? They should not have been in the house. The defendant indicated to me repeatedly when I probed intensely that he had instructed them to be out of the house and Mr. Duffy as I indicated in my Table 9 in my report on page 33 indicated that Mrs. Duffy and the child left in their car about 9:45am and that is the father that is saying that."

43. As regards Dr. Thompson's first "deception", in cross-examination it was put to Dr. Thompson that the toxicologist retained on behalf of Mr. McGee, Dr. O'Neill, had noted the

other construction work in his report and it was also referred to in the report of Professor Heaney, the defendants' respiratory consultant. He was asked whether, in the light of that, he wished to reconsider his use of the word "deception" but he declined to do so on the basis that it had not been disclosed to Professor Burke. He was finally asked (at Day 12, p. 5):

> "15. Q. Dr. Thompson, my question to you is in circumstances where two experts for the defence were aware of this alternative construction site. Are you holding to your view that this is a deception being perpetrated by these plaintiffs on this court and on the experts in general –
>
> Mr. Justice Cross: I think you have asked him that three times. I think, Dr. Thompson, you have been asked that question three times and you have declined to change your opinion; isn't that correct?
>
> A. That is correct."

44. When cross-examined about the reports of Mr. Wood upon which he relied for his 30 minute proposition, he was asked whether in fact these reports were primarily concerned with ventilation. He repeatedly refuted that suggestion saying it was not the focus of the papers. In fact, Dr. Thompson sought to downplay significantly the fact that ventilation had any relevance to the case at all. He said (Day 12, p. 66):

> "172. Q. Yes. So you, you believe ventilation has no impact on the presence or absence of isocyanate at 30 minutes or thereafter?
>
> A. That's correct, I do not, and that's because of those four physical chemical parameters…"

When questioned about various industry statements to the contrary, including the documents issued by Icynene Inc. itself, Dr. Thompson insisted that ventilation was irrelevant. He went on to give evidence that because ventilation was not relevant, he was unaware of how many air changes per hour Mr. McGee's men had achieved with their ventilation fan and he confirmed that he had not made any enquiries of Mr. McGee in that regard.

A number of documents from other sources were put to Dr. Thompson in cross-examination including a publication from the US Environmental Protection Agency stating that isocyanate vapours and aerosols may linger in a building after application until it is properly ventilated and thoroughly cleaned. He disagreed that there could be isocyanate vapours. Similarly, when asked about the EPA statement that cutting or trimming the foam as it hardens may generate dust containing unreacted isocyanates and other chemicals, he again said he disagreed with the EPA. When asked why, if he did not agree with the EPA, he cited its document in his own report, he said he referred to it for a different purpose but not in relation to vapours or dust being present.

45. Dr. Thompson was also asked in cross-examination how long it takes for the SPF to fully cure from top to bottom. Dr. Thompson said it varied from formulation to formulation but the norm would be a few hours being one or two to six or eight hours before the curing is completed, also depending on the thickness of the SPF. He was asked to repeat this and he said the curing time could be as little as two or three hours or as much as six or eight hours. Arising from this answer, Dr. Thompson was asked about two documents cited in his own bibliography which were two papers discussed with an interviewer, Mr. J. Davidson, who is described as the CEO of Spray Foam Insider and published on YouTube. One paper was called "SPF Chemistry makes it a safe product" and the other one "SPF lawsuit avoidance".

46. He was asked in cross-examination about an extract from the interview (Day 12, p. 92):

> "313. Q. … and I think you say in relation to curing, you say 'with SPF it's the dose that makes the poison… so if you are looking at size a … and you want to be very cautious with that … at the employees that work with it … because that has a hazard associated with it … So when you go to the far extreme and you have the cured SPF … article after 24 or 48 … hours … and the risk is gone' – So now how does that timeframe that you gave Mr. Davidson in 2018 of 24 to 48 hours compare with what you told Judge Cross of 6 to 8 and possibly 10, 11 or 12?
>
> A. Well the, the 24 is the, the hourly rate that, that I have read in several manufacturers' statements. But I talked to manufacturers and I know that they are, that those are safety margins and that and they are the ones who told me that the curing process is normally in the 6 to 8 hour range.
>
> 314. Q. Yes?
>
> A. But they, they put on their documents that 24 is the safety margin.
>
> 315. Q. Okay, so who then are you quoting or relying upon when you said six hours in this court this afternoon?
>
> A. I was relying on my general knowledge that I have obtained over the last six years from talking to a lot of people in the industry…
>
> 316. Q. … So in 2018, just two years ago, you gave your opinion to Mr. J. Davidson that for the homeowner to wait until, for 24 or 48 hours, that that appears to be

prudent in all of the circumstances, Dr. Thompson; is there any reason why you seem to have changed your opinion between that time and your evidence today?

A. It's, it's case specific. And in this particular case the spray put on in the sunroom was covered with dry, drycell the same day. In, in the attic there was no exposure at all because nobody went in the attic. And so the attic certainly had 24 to 48 hours for that to finish reacting. And the SPF applied in the sunroom was at least enough cured that they could put the drycell over it. And that further sealed anything that was still reacting in that way."

47. Professor Burke, accepted to be one of Ireland's leading respiratory physicians, in his evidence dealt with the significant damage observed by him to the larynx of each plaintiff. He carried out two bronchoscopies each on Mr and Mrs. Duffy, something he had never previously done. Speaking of his findings (Day 3, p.9) he was asked:

"15 Q. So on bronchoscopy what did you note?

A. It was honestly one of the most irritated larynxes I have ever seen. I think I have done 40,000 bronchoscopies or something like that and it was not only red, it was raw and it was friable and it just looked kind of angry and it was very dramatic and basically what it told me was that something had very significantly irritated – I don't want to say it was just the larynx, the nose was irritated, the lungs were irritated, but the larynx in particular was very very red and very raw and even dropping saline or lignocaine solution onto it, we had to drop an enormous amount of local lignocaine solution, much more that we would normally do, even though the patient was asleep but you would expect that, I guess, with the larynx being so red."

48. In dealing with the issue of causation, Professor Burke was asked (Day 3, p.32):

> "58 Q. The evidence of Mr. Duffy to the court has been that he slept in the master bedroom that night with a two foot by two foot hole in the ceiling accessing the attic vault where the spray foam had been applied earlier that day, and we know from the data sheet that it requires 24 hours before anybody is to approach the spray or come within 50 feet of the spray. In light of what she saw in the airway visualisation, are you in a position to offer an opinion to the court on the causation?
>
> A. Definitely. There is no question but that Mr. Duffy inhaled something that day that caused an acute inflammatory response in his airways, and particularly his larynx. There is no question about that. Now, I cannot, as it is not possible for medical science to tell you by looking at something that is very inflamed what caused the inflammation beyond saying it was something that had huge toxic irritant properties. So if you said to me it was chlorine gas or formic acid or something that exploded in the lab or something maybe, but the only time I have ever seen that degree is with isocyanate and the literature says it is the most common. Certainly in my experience it is the most common. Anything else would be – I have never seen that degree of inflammation of redness and friability as a response to inhaling anything else…"

49. Professor Burke was also asked about the possibility that the injury to the plaintiffs could have been caused in the course of removing the fibreglass insulation (Day 3, p.39-40):

> "70 Q. … It was suggested to Mr. Duffy yesterday at the end of his evidence or close to the end of his evidence that he has suffered the airways irritation and inflammation that he currently has as a result of being exposed to either fibreglass or plasterboard.

A. Well, I don't think so. In fact I have never seen it. I mean, fibreglass and fibreboard I spent four summers on building sites where I was sent up to the attic to unroll fiberglass insulation, so I have some experience. Fibreglass and fibreboard are used all the time, obviously, and I have never seen anything remotely in this ballpark remotely with this severity. In fact, I have never seen reactive airway disfunction syndrome caused by fibreglass and in fact when I saw some reports mentioning that I retreated to my text book and looked at the standard reference text book and they list the causes of acute irritant airway disease and for sure they list isocyanate and for sure they don't list fibreglass."

50. In the course of his cross examination, Professor Burke said (Day 3, p.76):

" I cannot tell you whether the man inhaled isocyanate or not. I can only tell you that it would appear that there was isocyanate in the house and all I can say is this: in a competition if I had to guess what chemical would do this on the basis of what would do it most commonly and what would do it in this fashion, I would have picked isocyanate."

51. In further cross examination, Dr. Thompson's theory about the cause of the injury being fibreglass was canvassed with Professor Burke (Day 3, p.99 - 100):

"245 Q. But you are aware when plaster board is cut there are little particles of fibreglass and silica dust that are released into the air?

A. Yeah, sure.

246 Q. It appears that that that operation was carried out in the house on the day in question. There was another team of workers who did the entire sunroom?

A. If you say that I fully accept it but in turn I have to say if it is a horse race between isocyanate and fibreglass, there is only one winner, and it is not fibreglass or silica on the basis of my experience or on the basis of the literature.

247 Q. Because fibreglass is an irritant though, isn't it?

A. Everything is an irritant. The question is can it cause this kind of thing and the answer is no.

248 Q. Would you accept the proposition that the larger fibres that they can cause skin, eye and upper respiratory tract irritation?

A. Yeah, but irritation, if you spray your deodorant on it is an irritation. The question is can it cause reactive airways dysfunction syndrome and the answer is no. You can pull any chemical you like from the Bohr equation and tell me it's an irritant and that is true. The question is can it cause RADS and the answer is no.

249 Q. I suggest to you that there seems to have been a significant exposure over a longer period of time during the entire day and the fibreglass apparently has been left in the garage adjacent to the property since the other workers dismantled it. That was all going on also?

A. Well, if you say that I fully accept it but it doesn't change an iota of my opinion because of what I have just said. Fibreglass doesn't cause RADS. It has never been shown to cause RADS. It is not listed in the causes of RADS and isocyanate is the most common cause of all of that."

Judgment of the High Court

52. The trial judge made a number of findings of fact relevant to the issue of liability which are not appealed. Central to that issue was the resolution of the conflict between the Duffys and Mr. McGee as to whether or not they were told to remain out of the house and if so, for what period. In this respect, the judge found as follows:

> "29. I accept the evidence of Mrs. Duffy and Mr. Duffy and I find that, in January 2016, Mrs. Duffy asked Mr. McGee whether the product was safe and he reassured them that it was. Mrs. Duffy's main concern was that Charlie Jo was a baby and Mr. McGee said the product was fully safe, breathable and water blown, doesn't off gas and that it was the best product on the market.
>
> 30. Mr. and Mrs. Duffy are adamant that at no stage was there mention that they would have to vacate the house during the installation or do so for any time thereafter. Mr. McGee is adamant that he advised the Duffys that they would have to be out of the house for two hours after the spraying had finished.
>
> 31. Issues of liability will be considered later but I have no doubt and so find that Mr. and Mrs. Duffy were not at any stage appraised that their absence from the house was required as a matter of personal safety for themselves or Charlie Jo. I have no doubt whatsoever that had they been so appraised that Mrs. Duffy would have left the house with Charlie Jo before the spraying commenced and none of the Duffys would have returned until they were assured it was safe to do so.
>
> 32. I come to this conclusion not just because I have no doubt that the Duffys are rightly particular in relation to their own safety and even more rightly particular in relation to the child's but it is clear that Mr. McGee's recollection of the entire event

is less than accurate. Mr. McGee was apparently still under the impression in 2019, when consulting his then expert, that the job had taken two rather than one days. If Mr. McGee could not recall until presumably he later consulted his records that it was just a one day job, I have no doubt that his recollection in relation to the minutiae of what occurred is defective and I prefer the evidence of Mr. and Mrs. Duffy on whose minds the events are clearly etched.

33. I fully accept that Mr. McGee believes at this stage that he did tell Mr. and Mrs. Duffy that they should not be in the property during the spraying and for two hours thereafter. I accept that this is Mr. McGee's usual practice. Mr. McGee at all stages remains convinced of the absolute safety of his product in any circumstances and I find if he did mention to Mr. and Mrs. Duffy the desirability of them being out of the property it was not so mentioned as a matter of safety concern and Mr. McGee made no attempt to enforce the absence of the plaintiffs from the house for the two-hour period.

34. Mr. McGee accepts that he did not cordon off the house with any signs while the process was taking place and he did not furnish Mr. or Mrs. Duffy with the data sheets or safety dockets or get them to sign any of same."

53. The judge also found that Mr. McGee was mistaken in his view that the trip to Mrs Duffy's mother was to last for the entire day when in fact, it was only ever intended to be of short duration. He accepted the evidence of Mr. Doherty who said that he saw Charlie Jo walking or running around the outside of the sunroom as he worked on it. He also accepted the evidence of Mrs. Duffy that Mr. McGee's workmen or one of them was seen by Charlie Jo with his protective equipment and he made some joke to Charlie Jo to the effect that he looked like a spaceman.

54. He found this to be indicative of the fact that Mr. McGee and his employees were aware that Mrs. Duffy and Charlie Jo were present in the house at the time that the spraying was going on. He concluded that Mr. McGee's workmen were or ought to have been aware that Mrs. Duffy and Charlie Jo were in the house during the main part of the spraying and took no steps to ensure that Mrs. Duffy and Charlie Jo left the site or to cordon off the house to prevent anyone accessing same.

55. On the issue of ventilation, the judge held as follows:

> "53. In relation to ventilation I find that while neither Mr. or Mrs. Duffy was aware of any ventilation or extraction machine and Mr. [Doherty] indicated that when he and his men came back to the sunroom to put back the plasterboard after the insulation was completed that there was no ventilator and at no stage did he see any ventilator in the property, I accept that Mr. McGee had one ventilator, the dimensions or capacity of which are not at all clear working in the sunroom while his workmen were applying the insulation and once they had finished they removed this ventilator to the landing. I accept the evidence of Mr. [Gallagher], the plaintiff's engineer and so find that the structure of the roof, which required three separate openings because different areas were isolated from the main, also required that each of those areas be separately ventilated."

56. The judge went on to make other relevant findings of fact including that on the night of the installation, there was a pungent smell in the house and when the Duffys awoke the next day, they had symptoms as in a head cold, sore throat, burning sensation, sore eyes, runny nose and chestiness. The judge accepted that in the weekend after the installation, Mr. Duffy contacted Mr. McGee complaining about the smell and advising that the family had

"bad doses". Mr. and Mrs. Duffy attended their GP with Charlie Jo and were advised to bring her to Letterkenny Hospital where she was admitted for two nights.

57. The doctors in the hospital enquired about exposure to irritants and asked for details of the products involved. Mr. Duffy contacted Mr. McGee in some considerable distress complaining that Mr. McGee's product had poisoned their child. Following this conversation Mr. McGee forwarded a data sheet to the Duffys which he obtained from the internet. This document indicated that nobody should be in the house for 24 hours after the spraying and it was only during the course of the trial that it emerged that the actual product used by Mr. McGee had a two-hour (with appropriate ventilation) period before a safe return to the house could be recommended. While the plaintiffs did not accept that the defendants had established that the product used was the low VOC Icynene, the judge accepted Mr. McGee's evidence and that of the second defendant that at the time of the installation, all Icynene in Ireland was the low density one.

58. The judge was of the view that the documents put in evidence established the following:

> "63. It is clear from all of the data sheets for Icynene products that the chemicals in both the A and B side and in the final 'cured' product are potentially hazardous and that in order to mitigate against risk the manufacturer and the regulatory authorities in the United States of America, Europe and in Ireland require that during spraying full PPE including a respirator are required that no one is to come within 50 feet of the spray foam without the specified PPE and respirator during the spraying, that everyone other than the certified sprayers are to leave the site for the duration of the spray and for 24 hours after the spraying is completed unless it is the low VOC product (and the requisite 40 air changes per hour is achieved), when the absence

must be for the duration of the spray and for two hours after the spraying. Also, there must be adequate active negative pressure ventilation during the spraying and for 24 hours after the spraying is completed unless it is the low VOC product and the requisite 40 changes per hour is achieved for the duration of the spray and two hours thereafter. There are ‘no exceptions’ to this rule.

64. Accordingly, I find with the low VOC product, which is the product in question there may be access to the site two hours after spraying if, and only if, the requisite 40 changes per hour has been achieved during the spray and for two hours thereafter.

65. I find that all the data sheets for the product graphically highlighted the nature of the potential damage to individuals’ lungs and larynxes unless the required precautions were taken.

66. Clearly the change in Icynene which allowed for entry after two hours due to or alterations to the B side was a great commercial benefit to the manufacturers and distributors of Icynene.

67. I find that the plaintiffs abandoned their house soon after receiving the data sheets from the defendants and remained outside notwithstanding the air quality report undertaken in August which found that there were no chemicals present in the house at that time. They have not been able to return.”

59. In fact, the evidence established that the plaintiffs had abandoned their home a few months after the events in issue, never to return, and ultimately took up residence in a caravan. This was despite the fact the fact that they obtained an air quality report in August 2016 which found no chemicals present in the air in the house.

60. Having made these findings of fact, the judge went on to consider the issue of liability in the light of those findings, and he held that Mr. McGee had been clearly negligent in a number of respects. He said:

> 69. I find that the first named defendant was clearly negligent in a number of matters.
>
> 70. I accept that Mr. McGee was an installer with great experience who clearly believed in his product and in the general safety of the product. However, I find that this general belief seems to have resulted in an extremely lax approach to the necessary safeguards. The product itself is I find essentially safe if properly applied with the proper safeguards."

61. The judge went on to make twelve specific findings of negligence against Mr. McGee at para. 71 of the judgment which may be briefly summarised. Mr. McGee failed to advise the Duffys that they were required to be out of the house during the spraying and for at least 2 hours thereafter. He did not communicate the risks of the product if the advised safeguards were not adhered to. He did not carry out any measurements which would have enabled him to calculate the requisite 40 ACH both during the spraying and for two hours thereafter. He found that Mr. McGee was in breach of s.12 of the Safety Health and Welfare and Work Act 2005 and the Safety Health and Welfare at Work (Chemical Agents) Regulations 2001 of which he was entirely ignorant.

62. The most significant finding of the judge regarding negligence was in relation to ventilation and should be set out in full:

> "x. Most importantly I find that the first named defendant was negligent in relation to the air extraction and ventilation of the property.

(a) Mr. McGee though aware that roof contained a number of isolated areas that would have to be separately accessed by separate entrance holes made no calculation as to the air extraction rates required to meet the requisite changes necessary to reduce the absence from the house from 24 to two hours.

(b) The first named defendant removed the air ventilator from the sunroom immediately after they had finished working on the spray there and there was no extractor present therein for the requisite two-hour period let alone an air extractor that would provide the necessary ventilation and further allowed Mr. [Doherty] and his workmen into the sunroom when same should have been clear for at least two hours while it was being properly ventilated.

(c) The safety data for the revised product make it clear that it is not safe to allow anyone into the building after two hours unless the appropriate air ventilation rates have been achieved. The first named defendant made no calculation to ensure that this was done. The first named defendant had no separate ventilators or air extractors working for the separate areas in the roof space, which is a necessary requirement given the engineering evidence, merely allowing the extractor to be in each roof area while the spraying was being undertaken and after the spraying transferring the extractor to the landing area where it worked for approximately two hours.

(d) The defendants have not established accordingly that the property was ventilated adequately in accordance with their requirements before they allowed the Duffy family back into the property. I find that the property was not adequately ventilated to 40 air extractions per hour as required, as at the very least the separate areas in the roof were not properly ventilated in accordance with the requirements as stipulated by the plaintiff's engineer.

(e) In circumstances where they knew or ought to have known that the bedroom in which Mrs. Duffy and Charlie Jo was to sleep could not have its window opened they allowed that room and the other areas to remain with open holes until the next day with the Duffys in the property.

(f) The defendants were in breach of S.I. 619/2001 Safety Health and Welfare at Work (Chemical Agents) Regulations 2001, at Regulation 4 and Regulation 5.

xi. They allowed Mrs. Duffy and Charlie Jo to be and remain in the property while they were spraying in contravention of all safety requirements.

xii. They allowed Mrs. Duffy to sleep in the bedroom without any natural ventilation with Charlie Jo."

63. The next issue considered by the judge was the question of causation. He described the plaintiff's case as being "straightforward" in that the morning after the foam was sprayed, all three family members had respiratory symptoms which did not resolve and have continued.

64. He referred to Professor Burke's evidence, which I have already mentioned, and then turned to consider the evidence of Dr. Thompson and particularly the latter's views on the plaintiffs' attempt at "deception". Noting that the plaintiffs were highly critical of Dr. Thompson's evidence and independence as an expert, the judge made the following observation:

"84. I regret that I have come to the conclusion that Dr. [Thompson] was not acting as an independent witness in accordance with the obligation of experts in these courts. I have come to the conclusion that not alone was he [an] advocate but that he was a very partisan advocate who sought to denigrate the character of the plaintiffs."

65. Thereafter, the judge explained in some depth the reasons why he had come to this conclusion. He rejected Dr. Thompson's opinion that there is no risk from the chemicals in SPF a matter of a few minutes after application as being incorrect. He preferred instead to rely on the advice of the EPA in the paper that was put to Dr. Thompson. With regard to the two Wood studies, he said:

> "92. In relation to the two studies by Woods et al both of these were conducted after the ventilation and air extraction required by the manufacturers were put in place which is of course precisely what did not occur in the case of the plaintiffs. Whereas it is correct that Professor [Burke] is of the view that the exposure that caused the problem was to component A (isocyanate) rather than component B, it was always the plaintiffs' case that the injuries were caused by exposure to both components and the united foam. And it does not matter much to the plaintiffs' case as to which of the compounds are caused the plaintiffs' injuries or whether they were caused by a combination of compound A and B."

66. At para. 95, the judge again referred to Dr. Thompson's lack of independence:

> "95. Throughout his evidence I came to the conclusion that Dr. [Thompson] was proceeding as an advocate on the basis of a paper he had delivered to the industry on 'How to avoid a law suit'.
>
> 96. I am fully supportive of the idea that a judge should decide as little as is necessary and conscious as I am that I have already decided that Dr. [Thompson's] evidence cannot be accepted as being in any way the unbiased evidence of an expert, I feel obliged to go further and I have come to the opinion that the fact that Dr. [Thompson] in his evidence ignored or downplayed the central importance of adequate ventilation in the Woods et al studies and also in the manufacturer's data sheets rendered his

> impartiality as being highly suspect and ultimately is sufficient to ignore his findings. An expert may descend into the realm of the advocate due to excess of enthusiasm for the cause that he expounds. I have experienced this on only a very few occasions in my time as a judge. I am afraid that I must record that Dr. [Thompson's] partisanship went much further.

67. As examples of this, the judge referred to table 7, 8, 9 and 10 of Dr. Thompson's report on which I have already commented and again to his claim of "deception" by the plaintiffs, saying:

> "103. The fact that Dr. [Thompson] is prepared to attempt to blacken the plaintiffs' testimony (unfairly) of itself entirely undermines his credibility as an independent witness. It must be forcibly pointed out that it is no role for an expert to attempt to act as a barrister in the case suggesting inaccuracies or to describe matters as deceptions."

68. The judge found that there was in fact no deception on the part of the plaintiffs in relation to the work carried out by Mr. Doherty, of which Mr McGee was at all times aware.

69. Commenting on Dr. Thompson's alternative causation theory that fibreglass was responsible for the plaintiffs' injuries, the judge said:

> "106… the type of injuries and irritation caused by fibreglass is of a mechanical nature mainly caused by physical contact and I accept the evidence of Professor [Burke] and indeed agreed by Professor [Heaney] on behalf of the defendant that the type of injuries suffered by the plaintiffs were chemically caused.

107. In his evidence Professor [Burke] discounted the alternative theory colourfully saying that in a two horse race the fibreglass theory was 'not at the races'. I accept that description as being correct.

108. I do not accept that the fibreglass or the panels could have been the cause of the irritation to the plaintiffs as the medical evidence from both Professor [Burke] and Professor [Heaney] on behalf of the defendants indicates that the type of damage or irritation likely to be caused by fibreglass is of a mechanical nature (e.g. if you rub against it) and that the injuries sustained by the plaintiff was of a significant chemical exposure. I also find that the sunroom was reasonably cut off from the rest of the house and it is highly unlikely in the extreme that any fibreglass escaped from the sunroom to the rest of the house and do not find this to be credible.

109. It is not of course the obligation of the defendant to establish any alternative cause for the plaintiffs' injuries. However, I have come to the conclusion beyond any doubt whatsoever that each of the plaintiffs sustained their life altering serious injuries as a result of exposure to chemicals, either or both component A or B and as a matter of probability from exposure to chemicals in component A.

110. I have come to this conclusion because of the failure of the first named defendant to properly ventilate the property in accordance with the requirements of safety."

In two further paragraphs with which the defendant, at least partly, takes issue, the judge said:

"113. I do not find that the first named defendant, his servants or agents was in any way negligent in the manner in which they sprayed the foam but rather in their failure to properly ventilate and as a result Mrs. Duffy was exposed throughout the day and

> Mr. Duffy was exposed when he returned to the property at 5 pm and throughout the night. The fact of the smell (even though its precise nature could not be identified) is likely to be indicative of the fact that chemicals had indeed escaped and were in the property due to the lack of proper ventilation. Mrs. Duffy together with Charlie Jo then slept throughout the night in the room underneath an opening and in respect of which the window could not be opened and there was no natural ventilation or indeed the possibility of natural ventilation.
>
> 114. Accordingly, I find that the plaintiffs' injuries were caused beyond a reasonable doubt by the exposure to the product as sprayed by the defendants. And on the balance of probabilities, I find that due to the nature and extent of the plaintiffs' injuries it was due to exposure to isocyanate."

70. Before examining the issue of damages, the judge considered a claim advanced on behalf of Mr. McGee that the plaintiffs' claim should be dismissed pursuant to s.26 of the Civil Liability in Courts Act 2004. The judge analysed and rejected this application and the judge's determination in that respect is one of the matters of which complaint is made in Mr. McGee's Notice of Appeal. However, at the hearing of the appeal, Mr. McGee's legal team abandoned this ground of appeal, and properly so in my view.

71. Having made these findings on liability and causation, the judge then assessed general and special damages in respect of both plaintiffs. These assessments are also the subject of appeal and I will return to them later in this judgment.

Grounds of Appeal

72. The grounds of appeal in the case of both Mr. & Mrs. Duffy are almost identical. Some of the grounds focussed on the judge's findings in relation to the absence of adequate

ventilation. The defendant claims that the evidence established that Mr. McGee had provided ventilation in excess of 40 ACH and the judge was wrong to conclude otherwise. It is also said that the judge misunderstood the Wood reports and in particular the control level of ventilation utilised for the purposes of those reports. It is also claimed that the judge misunderstood the circumstances of a report which he thought related to Mr. McGee's property.

73. The judge, it is said, was wrong to conclude that the presence of a smell was indicative of the presence of chemicals and this was unsupported by the evidence. His acceptance of Mr. Gallagher's evidence is criticised on the ground that Mr. Gallagher's evidence was based on an assumed need to be out of the property for 24 hours after the conclusion of spraying, rather than the 2 hours established by the evidence.

74. Central to the appeal is the defendant's ground that the judge was wrong to dismiss Dr. Thompson's evidence "although his evidence regarding toxicology was uncontroverted by any of the plaintiff's witnesses and the plaintiff had not called any expert evidence to counter his evidence."

75. Mr. McGee further contends that the judge was wrong to conclude that the plaintiffs had been exposed to both components A and B which was unsupported by the evidence. It was not physically possible, for Mr. Duffy at any rate, to have been exposed to isocyanate because he was not present in the house during installation or for a period of 2 hours after completion, contrary to Prof. Burke's evidence.

76. As previously noted, the appeal in relation to s.26 of the Civil Liability and Courts Act 2004 has now been withdrawn. The defendant contends that the damages assessed, both general and special, were excessive and both plaintiffs failed to mitigate their losses. There is finally an appeal against the trial judge's order that as a condition of a stay pending appeal,

the sum of €300,000 be paid to each plaintiff. However, that sum was, in fact, paid without any application on behalf of Mr. McGee to this court for a stay on that part of the trial judge's order pending appeal.

77. To a very significant extent, the defence of these claims in the High Court turned on the evidence of Dr. Thompson and one of the central issues in these appeals is the decision of the judge to reject that evidence in its entirety. Accordingly, I propose to consider this issue first.

Expert evidence

78. Expert witnesses enjoy a special position in the law of evidence. Unlike non-experts, experts are not confined to giving purely factual evidence but may give opinion evidence where certain criteria are satisfied. The proliferation of the expert witness is an ever-present feature of almost all spheres of litigation, one such being personal injuries.

79. Very frequently, the evidence of the expert will be decisive to the outcome, particularly where, as here, there are complex scientific or medical issues arising. Some of the most high-profile miscarriage of justice cases have arisen from serious failures on the part of experts. It is right therefore that the law expects and demands the highest standards of experts. This has found expression in many judgments and more recently, rules of court.

80. The expert is there to assist the court, not to decide the case and the court has no obligation to accept the evidence of any particular expert, even where it is uncontradicted - *per* Clarke J. in *Donegal Investment Group plc v. Danbywiske* [2017] IESC 14 at [7.1], [2019] 1 IR 150, at para 60.

81. It may appear obvious that the expert's duty is to assist the court and most expert reports include a declaration to that effect, as here. But it is unfortunately commonplace for

experts to succumb to the natural tendency to put the interests of their own clients first, unconsciously or otherwise. I commented on this in *Naghten (a minor) v. Cool Running Events Ltd.* [2021] IECA 17:

> "39. As has been frequently observed in the past, courts have to be mindful of the fact that, despite their best endeavours to be impartial, experts can on occasion become too aligned in their opinion to the case their client wishes to advance. As Charleton J. put it in *James Elliott Construction Limited v Irish Asphalt Limited* [2011] IEHC 269 (at para. 13):-
>
> > "A judge must bear in mind that, notwithstanding that an expert may firmly declare a duty to the court, it is a natural aspect of human nature that even a professional person retained on behalf of a plaintiff or defendant may feel themselves to be part of that side's team."
>
> 40. This is a particular danger for forensic experts whose practice is mainly concerned with litigation, as inevitably and understandably, such experts will only be retained by parties whose case the expert will support."

82. The views of Charleton J. in *James Elliott* referenced above, also place emphasis on the advantages enjoyed by a trial judge, as opposed to an appellate court, in the assessment of expert evidence. Charleton J. in the same passage already cited said:

> "Of particular importance in this case, therefore, has been the extent to which an expert has been able to step back and to consider and to think through an opposing point of view. As with demeanour, this is not readily demonstrated on a transcript of evidence. Rather, to a trial judge, it can be possible to see the degree to which a witness is thinking through the potential for an opposing theory before giving a

> reasoned answer. Experience in other cases demonstrates that there is a danger that experts may erect a barrier of apparent learning in order to disguise what would be an answer awkward to their side were it to be expressed plainly. Apart from the attractions of logic and reasoning, therefore, assessing an answer based on what is seen and heard in the courtroom remains important."

83. These comments were endorsed by the Supreme Court in *Donegal Investment Group plc v Danbywiske* where Clarke J. (as he then was) said:

> "5.3 It follows that the assessment of expert testimony does require a trial judge to assess the way in which that testimony is given. As Charleton J. pointed out, the way in which an expert responds to questioning or to the views of an expert witness tendered by the other side, can play an important role in the assessment by the trial judge of the extent to which the expert's view may truly be said to be uninfluenced by the case which his or her side is seeking to put forward. Furthermore, experience has shown that it is much easier to engage with the detail of evidence which is explored and explained (and, indeed, challenged) at an oral hearing by being present at that hearing rather than reading a transcript of what transpired.
>
> 5.4 For these reasons it seems to me that counsel on both sides were correct to accept that the principles in *Hay v O'Grady* do apply to the role of an appellate court in scrutinising findings made by a trial judge with the assistance of expert testimony."

84. Clarke J. went on to say that it remains the case that an appellate court should show significant deference to the views of a trial judge on the question of findings based on expert evidence because the trial judge will have had the opportunity to see the competing views challenged and scrutinised at the hearing.

85. Unfortunately, the hired gun syndrome is one with which all lawyers are familiar and is perhaps an inevitable by-product of adversarial litigation. It is however something that the courts have strived to avoid by the development of principles to be applied when considering the duties of experts. Perhaps more needs to be done by way of augmented rules of court. It may be an overstatement to say that one can always get some expert to subscribe to one's point of view, but there is nothing to prevent litigants with deep pockets consulting any number of experts until one is found who will support the case being made. As matters stand, there is no obligation to disclose such information to an opponent.

86. Well resourced litigants potentially enjoy a litigious advantage in this respect to the detriment of less well-off parties. It seems to me that there is the potential for a degree of unfairness here in the absence of transparency. New rules of court introduced in 2016 put the duty of an expert on a more formal footing with O.39, r.57(1) now providing:

> "It is the duty of an expert to assist the Court as to matters within his or her field of expertise. This duty overrides any obligation to any party paying the fee of the expert."

87. The rule also requires the report of an expert to acknowledge that duty and disclose any conflicts of interest. Parties are no longer at large to call as many experts as they like with O.39, r.58(1) empowering the court to restrict expert evidence to that which is reasonably required to enable the court to determine the proceedings. The 2016 rules introduce a number of other reforms aimed at focussing expert testimony with a consequent limitation on the sometimes significant costs associated with expert evidence.

88. These reforms include empowering the court to order a single joint expert, meetings of experts and joint expert reports following such meetings. Parties are now limited to calling one expert in any particular field of expertise unless the court for special reason

permits otherwise, where satisfied that such additional expert evidence is required to do justice between the parties.

89. The classic statement of the duties of experts, widely recognised in the common law world, is to be found in the judgment of Cresswell J. in *National Justice Compania Naviera S.A. v. Prudential Assurance Co. Ltd* (*The Ikarian Reefer*) [1993] 2 Lloyds Rep. 68 at 81-82:

> "The duties and responsibilities of expert witnesses in civil cases include the following:
>
> *1.* Expert evidence presented to the Court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation (per Lord Wilberforce, *Whitehouse v. Jordans* [1981] 1 WLR 246 at p.256).
>
> *2.* An expert witness should provide independent assistance to the court by way of objective unbiased opinion in relation to matters within his expertise. (See *Polivitte Limited v. Commercial Union Assurance Company* [1987] 1 Lloyds Rep. 379 at 386 per Mr. Justice Garland and *Re J*, [1990] FCR193 per Mr. Justice Cazalet). An expert witness in the High Court should never assume the role of an advocate.
>
> *3.* An expert witness should state the facts or assumption upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion (*Re J* Sup.).
>
> *4.* An expert witness should make it clear when a particular question or issue falls outside his expertise.

5. If an expert's opinion is not properly researched because he considers that insufficient data is available, then this must be stated with an indication that the opinion is no more than a provisional one (*Re J* Sup.). In cases where an expert witness who has prepared a report could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report (*Derby & Co. Ltd. & Ors. v. Weldon & Ors.,* The Times, November 9, 1990 per Lord Justice Staughton).

6. If after exchange of reports, an expert witness changes his view on a material matter having read the other side's experts report or for any other reason, such a change of view should be communicated (through legal representatives) to the other side without delay and when appropriate to the Court.

7. Where expert evidence refers to photographs, plans, calculations, analyses, measurements, survey reports or other similar documents, these must be proved to the opposite parties at the same time as the exchange of reports (see 15.5 of the Guide to Commercial Court Practice)."

90. These principles were further refined in *Anglo Group plc v. Winther Brown & Co. Ltd.* [2000] All ER 294 following upon the introduction of the new Civil Procedure Rules in England and Wales.

91. The overriding duty of the expert is owed to the court and includes the duty to provide an objective opinion. Objectivity by definition requires that one has regard to both sides of the case. An essential component of the duty of the expert is to ascertain all relevant facts whether they support the client's case or not. This duty has been reiterated many times. In *Fitzpatrick v. DPP* (Unreported: 5 December 1997), McCracken J. said:

> "It is my strongly held view that where a witness purports to give evidence in a professional capacity as an expert witness, he owes a duty to ascertain all the surrounding facts and to give that evidence in the context of those facts, whether they support the proposition which he is being asked to put forward or not."

92. An expert is not entitled to simply accept without question the instructions of his or her client and proceed to offer what must necessarily be a blinkered opinion. As O'Donnell J. (as he then was) observed in *Emerald Meats Ltd. v. Minister for Agriculture* [2020] IESC 48 at [28]:

> "It is important that experts, and particularly accountancy witnesses, do not simply accept their client's instructions as to certain matters and then construct calculations on the basis of those instructions. If that is all that is done, then the expert report is no more than the provision of a very expensive calculator. The court is entitled to expect that such experts will apply their critical faculties and their expertise to the case being made by their clients."

93. An expert should bring "an independent inquiring mind" to bear on the task at hand – per Kearns J in *AW v. DPP* [2001] IEHC 164 at [100]. In *WL Construction Ltd. v. Chawke* [2016] IEHC 539, an expert was strongly criticised for simply restating without question the claims made by the plaintiff without conducting any independent verification or analysis of those claims. This was held to amount to a failure in the expert's duty "to give an impartial and balanced view of the claim".

94. Thus, where the facts are in dispute, the expert should make clear which version of events forms the basis for his or her opinion and what the consequences for that opinion are if an alternative version is accepted. In that analysis, however, it is no function of the expert to advocate for a particular resolution of factual controversies as that would be to usurp the

function of the court. The duty of impartiality and independence necessarily imports a willingness on the part of the expert to remain open to alternative possibilities and if necessary, to change his or her mind when confronted with new information.

95. Where it is found that an expert has not complied with these duties, the question arises as to whether this should affect the admissibility of the expert's evidence or merely the weight to be attached to it. This issue was considered by the Canadian Supreme Court in *White Burgess Langille Inman v. Abbott and Haliburton Co.* [2015] 2 SCR 182. The Court's judgment was delivered by Cromwell J. who carried out an extensive analysis of the law relating to expert evidence in various common law jurisdictions. In a passage dealing with the expert's duties and admissibility, Cromwell J. said (at p. 201):

> "[33] As we have seen, there is a broad consensus about the nature of an expert's duty to the court. There is no such consensus, however, about how that duty relates to the admissibility of an expert's evidence. There are two main questions: Should the elements of this duty go to admissibility of the evidence rather than simply to its weight?; And, if so, is there a threshold admissibility requirement in relation to independence and impartiality?
>
> [34] In this section, I will explain my view that the answer to both questions is yes…"

96. With regard to Canadian law, the Court said that the weight of authority strongly supports the conclusion that at a certain point, expert evidence should be ruled inadmissible due to the expert's lack of impartiality and/or independence. Cromwell J. referred to a number of authorities which supported this proposition. He instanced a number of cases which underpinned the following conclusion (at p. 203):

"[37] In other cases, the expert's stance or behaviour as an advocate has justified exclusion:…

[38] Many other cases have accepted, in principle, that lack of independence or impartiality can lead to exclusion, but have ruled that the expert evidence did not warrant rejection on the particular facts."

97. He went on to observe (at p. 204):

[40] I conclude that the dominant approach in Canadian common law is to treat independence and impartiality as bearing not just on the weight but also on the admissibility of the evidence."

98. In *Kennedy v. Cordia (Services) LLP* [1916] UKSC 6, the U.K. Supreme Court considered the same issue. A joint judgment of Lords Reed and Hodge was delivered with which the other members of the court agreed. In considering the admissibility of the evidence of skilled witnesses, the court said (at para. 44):

"44. There are in our view four considerations which govern the admissibility of skilled evidence:

(i) whether the proposed skilled evidence will assist the court in its task;

(ii) whether the witness has the necessary knowledge and experience;

(iii) whether the witness is impartial in his or her presentation and assessment of the evidence; and

(iv) whether there is a reliable body of knowledge or experience to underpin the expert's evidence."

99. With regard to the third requirement of impartiality, the court said (at para. 51):

> "51. Impartiality and other duties: If a party proffers an expert report which on its face does not comply with the recognised duties of a skilled witness to be independent and impartial, the court may exclude the evidence as inadmissible…the requirement of independence and impartiality is in our view one of admissibility rather than merely the weight of the evidence."

The Evidence of Dr. Thompson

100. The trial judge held that Dr. Thompson's evidence should be rejected in its entirety. Mr. McGee complains that this amounted to an error of law on the part of the judge. While counsel for Mr. McGee conceded that in some respects, Dr. Thompson may have gone too far in his evidence, particularly in the context of the allegations of deception against the Duffys, it was said that this should only go to the weight of the evidence and should not have resulted in its total exclusion.

101. In reaching the conclusion he did, the trial judge found that Dr. Thompson acted as a partisan advocate who sought to denigrate and blacken the plaintiff's evidence unfairly and further that he ignored and downplayed the central importance of the issue of ventilation in the case. As *Donegal Investment Group plc v Danbywiske* shows, this court must accord considerable deference to the views of the trial judge about Dr. Thompson's evidence, the judge having had the opportunity to observe this witness over three days of examination and cross-examination.

102. It seems to me that there were a number of aspects of Dr. Thompson's evidence that give rise to serious cause for concern in the context of expert testimony. These include the following:

(i) Dr. Thompson, rather extraordinarily it must be said, purported to give an opinion on Irish law in the context of *res ipsa loquitur*. This was something that was entirely beyond his competence and entirely inappropriate for a supposedly independent expert.

(ii) The bedrock of Dr. Thompson's evidence, repeated on countless occasions by him, was the 30-minute proposition concerning the properties of isocyanate. For this fundamental proposition, he did not rely on his own researches or expertise but rather on two papers which were not independent peer reviewed scientific papers, but were commissioned by the SPF industry and were, in any event, concerned with the question of ventilation.

(iii) Dr. Thompson's report is virtually devoid of any reference to ventilation, notwithstanding the fact that the manufacturer of Icynene makes clear in all its published documents, of which he was aware, that ventilation is critically important to the health and safety of those in the vicinity of SPF spraying operations. Yet, as the trial judge noted, in his evidence he repeatedly sought to downplay and effectively ignore the relevance of ventilation.

(iv) In preparing his written report and his oral evidence, despite the fact that Dr. Thompson was aware that ventilation was the cardinal issue in the case, he made no enquiries from Mr. McGee regarding how many ACH his men had achieved during the spraying works and thereafter.

(v) Dr. Thompson's report and evidence was exclusively predicated on Mr. McGee's instructions on crucial issues such as the presence or absence of Mrs. Duffy and Charlie Jo in the house during the spraying, despite the fact that Dr. Thompson was well aware that these issues were strongly disputed. He made no attempt to consider, and evidently avoided considering, any alternative scenario

and in particular, that advanced by the plaintiffs, again of which he was fully aware.

(vi) Both in his report and his oral evidence, Dr. Thompson repeatedly accused the Duffys of lying, referring to their evidence as deception and misrepresentation. When confronted in cross-examination with clear evidence that there was no attempt by the Duffys to conceal the fact that there was another "project" ongoing in the house on the day of the spraying, he steadfastly refused to withdraw his allegations of deception.

(vii) Dr. Thompson, as already indicated, purported to give a medical opinion on Mrs. Duffy's psychiatric and skin complaints, an area clearly outside his competence and advanced for no obvious purpose other than attempting, again improperly, to undermine the plaintiffs' case.

(viii) In his report, Dr. Thompson cited and relied upon documents from the EPA to buttress the conclusions he arrived at and when statements in those documents were put in cross-examination that were inconsistent with his evidence, he sought to disavow the documents, saying the EPA was wrong.

(ix) Dr. Thompson's evidence to the High Court about the curing time for SPF was contradicted by his own statements in the interviews he gave to Mr. Davidson.

103. Any one of these matters on its own would tend to strongly suggest an absence of objectivity and impartiality on the part of Dr. Thompson but taken in combination, can only be described as a wholesale abdication by Dr. Thompson of his duty as an expert witness. I share the trial judge's experience of never having encountered such an approach to giving evidence by an expert witness before our courts. Dr. Thompson impermissibly donned the mantle of a partisan advocate in his efforts to discredit the claim of the plaintiffs.

104. It is simply not possible to adopt some kind of curate's egg approach to this evidence, as counsel for Mr. McGee suggested, and I am satisfied that the trial judge was perfectly correct to exclude Dr. Thompson's evidence in its entirety. There was in this case such an abject failure to comply with the most basic obligation of an expert, namely, to be objective and impartial, as to render all of Dr. Thompson's evidence inadmissible.

Liability

105. The trial judge accepted the evidence, which was uncontroverted, that there was a health and safety requirement, clearly specified by the manufacturer of Icynene, that nobody should be within 50 feet of the SPF either during the spraying or for 24 hours thereafter without full PPE and breathing apparatus. The only exception is where the low VOC Icynene was used, as here, **and** there was ventilation at the rate of 40 ACH. In the present case, Mr. McGee was unable to establish that this rate of ventilation was achieved, as the judge found. Indeed, Mr. McGee could never have established the requisite ventilation rate in the absence of carrying out any measurements that would have been enabled the calculation to be made.

106. It follows therefore that there was an absolute requirement for the Duffy family to be out of the house for the duration of the spraying and for 24 hours thereafter. It was a clear breach of duty not to have informed the Duffys of this requirement, as the judge found, and an even more egregious breach of duty to have permitted Mrs. Duffy and Charlie Jo to remain in the house during the spraying, when Mr. McGee and/or his workmen knew, or ought to have known, that they were present.

107. While the judge found other grounds of negligence in addition, these facts on their own were quite sufficient to establish negligence on the part of Mr. McGee. The defendant cavils with some of the findings of the judge about separate ventilators for the roof spaces being necessary, the rate of ventilation applicable in the Wood studies and the accuracy of

his reference to tests undertaken in, he believed, Mr. McGee's property. None of these, however, detract from the stark facts underlying the essential negligence here. Mr. McGee's absolute failure to take reasonable, or indeed any, care for the health and safety of the Duffys inexorably follows from the judge's un-appealed findings of fact as night follows day.

108. Of course, this finding of negligence on its own does not establish liability unless it is also shown that the negligence caused the injury of which the plaintiffs complain. In this regard, the defendant relied entirely on the evidence of Dr. Thompson which, for the reasons I have explained, was inadmissible and must be excluded. The only remaining evidence on the issue of causation therefore, is that of Prof. Burke and, to a lesser extent, Prof. Heaney.

109. Prof. Burke's evidence was clear that, as a matter of overwhelming probability, the injuries to each plaintiff that he observed were caused by exposure to isocyanate. He firmly excluded the possibility of there being any other candidate cause, and in particular fibreglass as suggested by Dr. Thompson. He gave clear and cogent reasons why this was not a realistic possibility, and these were accepted by the trial judge. Prof. Heaney, in effect, also agreed that the damage to each plaintiff's larynx was chemical in nature, and not mechanical, as it would be were fibreglass the responsible agent.

110. This evidence was so clear that the trial judge took the unusual step of finding that the plaintiffs' injuries were caused "beyond a reasonable doubt" by exposure to the product sprayed by the defendant, whether Compound A or Compound B, but as a matter of probability isocyanate. While the judge found that the likely cause of the injury to the plaintiffs was not the SPF spraying in the sunroom but rather the spraying in the roof area, and complaint is made of this by the defendant, it seems to me in reality little or nothing turns on this. As the trial judge said, and I agree, the plaintiffs' case on causation is

straightforward. Their injuries were caused by isocyanate and the only source of that isocyanate was the SPF installed by Mr. McGee.

111. His defence was predicated throughout on the basis that the plaintiffs could not have been exposed to isocyanate but that proposition in turn depends entirely on the evidence of Dr. Thompson, which was properly excluded. What remains, therefore, is that the plaintiffs established as a matter of probability, at a minimum, that their injury was caused by isocyanate and the negligence of Mr. McGee led to their exposure. This is not, as Dr. Thompson appeared to think, a case where *res ipsa loquitur*, although pleaded initially, was relied on by the plaintiffs at trial. If, and insofar as, there was any break in the chain of causation between Mr. McGee's negligence and the injuries suffered by the Duffys, and I do not accept this to be the case, the judge was entitled, and it seems to me required, to draw the inference that one led to the other.

112. In summary therefore, I am quite satisfied that the judge correctly concluded that Mr. McGee was negligent and that his negligence caused the plaintiffs' injuries.

Quantum

113. The injuries suffered by both Mr. & Mrs. Duffy were very serious, life changing and described by the trial judge as catastrophic. The injuries are described in detail in the judgment of the High Court, and it is unnecessary to repeat that detail. Before the injury, Mr. Duffy was an athletic relatively young man who had played football for his county at minor level. He was an excellent worker who enjoyed his job and never missed a day. He and his wife were living in what they regarded as their dream house, into which they had clearly invested a huge amount of time, effort and expense.

114. As a result of the injury to Mr. Duffy's upper respiratory tract, and in particular his larynx, described by Prof. Burke as among the most serious he had ever encountered and in the top 1%, every aspect of Mr. Duffy's life has been affected. He is subject to paroxysms of coughing which can be brought on by a multitude of causes including effort and exposure to odours or irritants of any kind. These coughing fits occur even during sleep so that Mr. Duffy awakens on multiple times every night and consequently suffers from sleep deprivation. His exercise is now limited to slow walking, and he is no longer able to do any physical work and certainly unable to do his previous job.

115. Given his limited educational attainments, he is unlikely to ever work again. His eyes and skin have been significantly affected by the exposure and he has suffered significant psychiatric symptoms including depression. He has actively considered suicide. He and his family have had to leave the home they loved and ended up living in a caravan. Mr. Duffy is unable to carry on anything approximating a normal life. His prognosis is poor and his symptoms have proven not be amenable to treatment. He is unlikely to improve in the future. In short, his life has been largely ruined by what has befallen him, his wife and daughter.

116. The trial judge was satisfied that Mr. Duffy was entirely truthful about his complaints and did not exaggerate them. The judge described his injuries as being near to, but not at the upper limits of compensation. He assessed general damages to date for pain and suffering at €200,000 and a further €200,000 for the future.

117. I do not think it is useful or necessary to analyse in any detail the principles to be applied to the assessment of general damages for pain and suffering for the purposes of this judgment. That exercise has been conducted in many recent judgments of this Court. Suffice is to say that the Book of Quantum in the present case is of no relevance, as the judge recognised, as it does not cater for the injuries in issue.

118. The defendant's appeal on quantum is confined to three grounds. The first is simply that the sum awarded, including for special damages, and amounting in total to €1,095,120 was excessive and disproportionate. Insofar as general damages are concerned, while the judge's characterisation of Mr. Duffy's injuries as "catastrophic" might not have been utilised in the more conventionally understood sense of injuries typically involving severe brain damage or quadriplegia, I do not think this description is necessarily unfair in the circumstances of this case.

119. There is perhaps no more fundamental requirement for living than the ability to breathe normally and in this case, that has been severely compromised so that there is virtually no aspect of the plaintiffs' lives that are untouched by their injuries. Having said that, I do accept that the figure awarded by the trial judge was certainly on the high side and more than this court might have been inclined to give, that being the relevant parameter recognised by the authorities. However, the award is not, in my view, so disproportionate to the latter figure that it can fairly be described as amounting to an error of law and in those circumstances, I would decline to interfere with it.

120. The second complaint agitated in the grounds of appeal concerning quantum is that the judge failed to take account of an alleged failure by the plaintiffs to mitigate their losses in particular by reference to the evidence of Ms. Stephanie Martin.

121. Ms. Martin was the defendant's care consultant who expressed the view in evidence that both plaintiffs' symptoms would be improved if they made more extensive use of their inhalers. There is, however, nothing to suggest that the trial judge failed to have regard to this evidence or that he was bound to accept it. This Court has been at some pains to point out that the fact that a trial judge does not mention a particular witness or piece of evidence

is not to be taken as meaning that they were not taken into account – see *Twomey v. Jeral Ltd.* [2022] IECA 177 at para. 33.

122. The same comment applies to the third ground of appeal identified in relation to damages, namely that the trial judge failed to have regard to the fact that the plaintiff did not call his GP who was his main treating doctor. Indeed, in his written submissions, the defendant goes considerably further in suggesting (at para. 92) that the plaintiffs failed to call any of their treating doctors. This submission is not understood in circumstances where Prof. Burke, as a consultant respiratory physician, was clearly both plaintiffs' main treating medical consultant.

123. A plaintiff is entitled to elect to call or not call any witness in a case. What the defendant here appears to be suggesting, or perhaps merely implying, is that the fact that a plaintiff's general practitioner is not called to give evidence should somehow be viewed with suspicion by a trial judge and an inference drawn from that fact adverse to the plaintiff. If that is what the defendant is seeking to infer, without saying so clearly outright, it is misconceived. A defendant is, of course, entitled to seek discovery of the medical notes and records of a plaintiff's general practitioner in an appropriate case and if that defendant considers that such discovery discloses material potentially damaging to the plaintiff's case, the defendant remains entirely free to call that GP as a witness. That did not occur in the present case. Accordingly, the ground is devoid of any merit.

124. None of the defendant's grounds of appeal on quantum appear to be directed towards the award of special damages under various headings by the trial judge beyond a claim that they were *"excessive and disproportionate"*. That is of little assistance to this Court in circumstances where it is a matter for the appellant to demonstrate error on the part of a trial

judge beyond merely stating that there was such error. The defendants' written submissions do not advance matters much further. They include statements such as (at para. 100):

> "The learned judge awarded €100,000 for home assistance although Mr. Duffy is well able to carry out a normal and functioning life."

125. This is a rather surprising submission in circumstances where the evidence accepted by the trial judge established that Mr. Duffy is anything but able to carry out a normal and functioning life. A similar complaint is made about the award for loss of earnings which is said to have been giving despite the fact that Mr. Duffy is "capable of working." This, again, is no more than a bare assertion which ignores entirely the evidence that was actually given and the findings of the judge in respect of that evidence, still less does it amount to anything approaching an error on the part of the judge.

126. Precisely the same grounds of appeal are advanced in respect of Mrs. Duffy on the issue of damages which I have already dealt with. The defendant suggests that in awarding the same sum for general damages to Mrs. Duffy, the judge, in effect, failed to differentiate between her claim and that of her husband. Again, I find this submission difficult to follow. The injuries suffered by Mrs. Duffy and their effect on her were almost identical to those of her husband so that it cannot be said that there was an obvious basis for differentiating between the two. Similar statements appear in the defendant's submissions in Mrs. Duffy's case as in Mr. Duffy to the effect that particular awards were unjustified because Mrs. Duffy is "well able to carry out a normal and functional life". I have already dealt with this.

127. There is a complaint that Mrs. Duffy was awarded damages for loss of earning opportunity in circumstances where she had been certified as not fit for work prior to her injury. While that is true, it is dealt with clearly by the trial judge who accepted her evidence that it was her intention to return to work after Charlie Jo started school. The defendant's

submissions do not engage in any way with this conclusion by the judge, which was supported by credible evidence, and I therefore do not propose to consider it further.

128. In summary, I am satisfied that Mr. McGee has failed to demonstrate any error by the trial judge in the assessment of damages in this case, either general or special.

Conclusion

129. For completeness, I should refer to the fact that the Notices of Appeal and written submissions of the defendant make complaint of the fact that the trial judge made it a condition of the stay pending appeal that a sum of €300,000 be paid to each plaintiff. In his written submissions, Mr. McGee contends that although this was paid, this Court should take the opportunity to establish the proper criteria for imposing conditions for a stay by the High Court. In circumstances where the condition was complied with by Mr. McGee and no interlocutory application was made to this court for a stay on that part of the High Court Order, the issue is clearly moot, and I would therefore decline to consider it further.

130. For these reasons therefore, I am satisfied that these appeals should be dismissed, and the order of the High Court affirmed.

131. Having regard to that conclusion, my provisional view is that the plaintiffs are entitled to their costs of these appeals. If the defendant wishes to contend otherwise, he will have liberty to apply to the Court of Appeal office within 14 days of the date of this judgment for a short supplemental hearing on the issue of costs. If such hearing is requested and results in the order proposed herein, the defendant may additionally be liable for the costs of such supplemental hearing.

132. As this judgment is delivered electronically, Binchy J has authorised me to record his agreement with it. I have had the opportunity of reading in draft the concurring judgment of Collins J. herein and I agree with it.