

**Neutral Citation No: [2025] NIKB 38**

*Judgment: approved by the court for handing down  
(subject to editorial corrections)\**

**Ref: COL12782**

**ICOS No: 22/103866**

**Delivered: 11/06/2025**

**IN THE HIGH COURT OF JUSTICE IN NORTHERN IRELAND**

**KING'S BENCH DIVISION**

**Between:**

**SEAN MADDEN**

**Plaintiff**

**and**

**KIERAN MADDEN**

**Defendant**

**Mr Colm Keenan KC with Mr Rory Fee (instructed by Doris & McMahon Solicitors) for  
the Plaintiff**

**Mr David Ringland KC with Ms Tara McKenna (instructed by JCW Rea & Son Solicitors)  
for the Defendant**

**COLTON J**

***Introduction***

[1] The plaintiff was born on 15 October 1986 and is a lorry driver by occupation.

[2] The defendant is his uncle who farms from premises at 28 Derrygonigan Road, Cookstown, Co Tyrone.

[3] On 7 May 2021, at the defendant's request, the plaintiff attended at the premises to carry out work to a cattle press which was due to be inspected by the Department of Agriculture.

[4] He attended at 6:15am before his day's work. Specifically, he had to weld pieces of metal that had been bolted on to the cattle press.

[5] Prior to his attendance in the previous days, his uncle had been painting the press.

[6] The welding equipment, namely a generator and grinder, was in place in the yard close to the cattle press.

[7] The plaintiff alleges that as he commenced his work by starting the generator an ensuing spark caused an explosion as a result of which he sustained very significant burning injuries.

[8] It is his case that the explosion was caused when the spark from the welder or generator ignited fumes which had escaped from a drum of paint thinner which had been used by the defendant on the previous day when he was painting the press. The drum in question was concealed behind the door in a shed adjoining the yard. It is his case that there must have been a leakage of fumes from the drum which has ignited the spark causing the drum to explode.

[9] It is the plaintiff's case that the defendant left the drum in an obscured position approximate to the area where he was working, with either the cap missing or only partially affixed. This, in turn, led to a leakage of inflammable vapour which caused the ignition in question. It is his case that the defendant thereby created a hazard for the plaintiff exposing him to the risk of the type of injury which occurred.

[10] The defendant's case is that the accident simply could not have happened in the manner alleged by the plaintiff.

### *The evidence*

[11] To a large extent the resolution of the fundamental dispute between the parties turns on the expert evidence. The plaintiff himself has little recall of the circumstances of the accident. He was adamant that the drum was not visible when he commenced his work. It is not entirely clear on what basis he alleges it was concealed behind the shed door, but this was the unequivocal case made at trial. The defendant attended court on the first day of the hearing. Mr Ringland informed the court that the defendant was unwell and would not be able to give evidence. He accepted that he had a statement from the defendant and was in a position to deal with the plaintiff's case but would not be able to call the defendant. I ruled that the case should continue and that I would review the position in relation to the inability of the defendant to give evidence at the appropriate time.

[12] As things transpired, the defendant maintained his position subsequently that he was unable to give evidence. I offered the defendant the option of serving a statement of evidence, but this was not taken up. Thus, the court has no evidence from the defendant as to the circumstances of the accident. Certainly, he would have been able to give evidence about his use, if any, of the drum, the condition in which it was left and, importantly, its exact location.

[13] Understandably, Mr Keenan on behalf of the plaintiff invites the court to draw an adverse inference from the failure of the defendant to give evidence or serve a statement of evidence on the plaintiff for potential introduction in the trial.

### *The expert evidence*

[14] The court heard evidence on behalf of the plaintiff from Mr Declan Cosgrove, an experienced consulting engineer. He drew the court's attention to the manufacturer's sheet in relation to paint thinners of the type contained in the drum.

[15] It is not in dispute that the thinners constitute highly flammable liquid and emit flammable vapour.

[16] The manufacturer's sheet sensibly cautions that paint thinners should be kept away from heat, hot surfaces, sparks, open flames and other ignition sources. Anyone working with or approximate to such liquid should use only non-sparking tools and take precautionary measures against static discharge.

[17] He also refers to the section which deals with handling and storage of paint thinners which provides:

"Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Avoid the formation of mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilation lighting. Do not breathe mist/vapour spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Use only non-sparking tools."

[18] In relation to storage the sheet provides:

"Store in tightly closed original container in a dry, cool and well-ventilated place."

[19] Mr Cosgrove explained that vapour is heavier than air and will tend to stay at a low level rather than dissipate readily. His evidence was that it tends to pool at a low level.

[20] It is clear from the photographs presented to the court that at some stage the container has exploded. The lid is missing. It is unclear whether it was completely absent when the explosion took place or was blown off as a result of the explosion.

[21] In any event, it would be potentially dangerous to leave the drum in a condition where the lid was either missing or not fully closed.

[22] Although employed as a lorry driver, the plaintiff had experience working with welding equipment. He accepted that it would be dangerous to carry out welding work close to a drum of paint thinners and that it was not safe to do such work if inflammable material was present.

[23] Mr Cosgrove supported the plaintiff's hypothesis as to how the accident occurred. His evidence was that "it fits." In short, his evidence was that on the balance of probabilities vapour has released from the drum to the ground and travelled under the closed door behind which it was concealed and into the farmyard making its way to the place at which the plaintiff was working. The evidence was that this was a distance of between 3 metres to 5 metres. He argues that the ignition was then caused by a spark generated by the plaintiff's use of the welding equipment. The ignition of the vapour trail travelled back to the shed door, under the shed door and then to the drum causing the explosion.

[24] In cross-examination Mr Cosgrove accepted that he was not a chemical engineer but nonetheless maintained that the plaintiff's case was a credible one.

[25] The defendant called Dr Green who has a doctorate in chemical engineering. He worked 10-15 years in the chemical industry. He had at least 10 years forensic experience in investigating fires and explosions. He argued that the plaintiff's case was incredible.

[26] To summarise his evidence, there is no dispute that if the cap had been properly secured there was no prospect of an explosion occurring.

[27] If the cap was even partially secured, it was his evidence that an explosive event could not occur. This was because of the negligible release of vapour which would occur in these circumstances.

[28] If the cap was missing, then vapour would release. His evidence was that such release would be slow, it would be of a modest amount, it would release in various directions and dilution by air would commence immediately.

[29] Importantly, his evidence was that if any vapour emerged from under the shed door, it would be subject to unrestricted open-air conditions, breezes/wind and in his view, would completely dilute.

[30] He also pointed out that if ignition had occurred inside the container behind the closed door and inside the shed, there would have been obvious ignition/explosive damage within the shed. There was no such evidence, which in Mr Ringland's submission, tended to suggest that the explosion involving the container did not occur in the position alleged by the plaintiff.

[31] Dr Green gave evidence concerning the relevant science. Vapour will only ignite if the ratio between the vapour and the air is between 1% and 33-36%. Below that level the concentration will be too diluted to cause an ignition. Above that level it would be too rich.

[32] If the cap in question was not fully secured then any release of vapour would, in his view, be negligible. His opinion was that it would be diluted below the level of 1% even within the shed itself, never mind if it were to escape to ground level and travel approximately three metres or more in the open air.

[33] Assuming that the cap was missing, he explained that the drum would consist of some liquid and between the liquid and the top of the cannister a mixture of vapour and air. Over time the vapour created will push the air from the drum so that the "headspace" between the liquid and the head of the drum would be entirely vapour. He further points out that if vapour had been escaping then the headspace would constitute 100% vapour which would not be capable of igniting as it would be too rich, that is above the 33-36%.

[34] He simply could not conceive of how it would be above the necessary concentration for ignition at the point where the plaintiff was working.

[35] He carried out some investigations in relation to windspeed at the relevant time and noted that at Belfast International Airport it was reported to be between 4-10 miles per hour. Obviously, any wind will further result in dilution of any vapour that is escaping. In short, he could not foresee that there would be any ignitable mixture outside the shed and, in particular, where the plaintiff was working. He said there was no prospect of this occurring.

[36] He did not have the opportunity to inspect the damaged drum but had inspected the photographs provided by the plaintiff.

[37] His evidence was that the damage was such that the explosion could only have occurred in two ways. The first would be if heat in the region of 105° centigrade was applied to the drum, something which he says is highly unlikely. That would have caused a substantial fire, of which there is no evidence.

[38] The only other possible explanation is that a spark or something capable of creating ignition occurred at or near the head of the cannister where it would be foreseeable that the mixture of vapour in air would be within the 1%-33% which could result in an ignition. Alternatively, it could have occurred if the drum had been knocked over resulting in a spillage close to where the plaintiff was working.

## *Conclusion*

[39] Based on the expert evidence that I have heard, I have come to the conclusion that the hypothesis put forward on behalf of the plaintiff is simply not viable. I cannot accept that the incident occurred in the manner described by the plaintiff. I found the evidence of Dr Green persuasive.

[40] I recognise fully the strength of Mr Keenan's submissions in relation to the failure of the defendant to give evidence. He could have been able to provide clarity on some of the matters about which the court is uncertain.

[41] I accept that on the balance of probabilities the drum exploded. I accept that the plaintiff has sustained significant burning injuries as a result. I am very conscious that if I am wrong in my conclusion this will result in an injustice to the plaintiff. That said, I am satisfied that the evidence simply does not support the case that he makes. It is not for me to speculate as to how the plaintiff did sustain his injuries, although Dr Green has put forward some credible hypothesis which might provide an explanation. For the court to find for the plaintiff on such a basis would be wrong and highly speculative. It is for the plaintiff to plead and prove his case – "secundum allegata et probate." I accept that there are circumstances in which the court can find on the evidence that a plaintiff sustained injuries in an alternative scenario to the one relied upon, sufficient to establish negligence on behalf of a tortfeasor. That is not the situation here. At trial the plaintiff has made a specific case. It rests on the allegedly concealed position of the drum. As previously indicated, the plaintiff has not given any evidence to support the alleged position of the drum. If, as a matter of fact, the drum was in a different position, I am simply not in a position to find, on the balance of probabilities, that the accident occurred as a result of any negligence of the defendant.

[42] Ultimately, I do not accept that I have been told the truth about how this accident happened.

[43] I, therefore, dismiss the plaintiff's claim and enter judgment for the defendant against the plaintiff.