Neutral citation: [2022] EWFC 207 (B)
Case No: ME2lC00285

IN THE FAMILY COURT

BEFORE:

HER HONOUR JUDGE SUSAN SULLIVAN

BETWEEN:

Z (LOCAL AUTHORITY)

- and-

C (MOTHER)

CHILD A (VIA THE GUARDIAN)

D (MATERNAL GRANDMOTHER)

APPLICANT

1. **(1)RESPONDENT**

(2) RESPONDENT INTERVENER Legal Representation

Miss Sophie Prolingheuer (Counsel) on behalf of the Applicant Local Authority. Mr Mark Twomey QC (Counsel) on behalf of the First Respondent, Mother. Ms Rebekah Wilson (Counsel) on behalf of the First Respondent, Mother.

Mr Philip McCormack (Counsel) on behalf of the Child. Mr John Thornton (Counsel) on behalf of the Intervener

Other Parties Present and their status
None known

Judgment

Judgment date: I September 2022

(start and end times cannot be noted due to audio format)

Reporting Restrictions Applied: YES

Number of folios in transcript: 154
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Her Honour Judge Susan Sullivan:

1. This judgment will take some time to get through because there are a lot of matters to deal with. I know that Mother, C, and the second respondent, D, will be very anxious, and so by way of a very short summary, to try and allay some of their anxiety, this judgment will confirm that A's rib injuries were inflicted, and not linked to birth trauma or re-fracturing after birth trauma. This judgment will also find that the Local Authority have not proved that there is a real possibility that either C or D caused the harm to A.

2. These proceedings were issued by the Applicant Local Authority in 2021 and relate to a young child, A, born in 2021. The background to the issue of the proceedings and the Local Authority application for an interim Care Order is well known.

3. Between 9 August 2021 and 12 August 2021, A was struggling to breathe, and her mother, C, was very worried about her. C took A to the GP and then to a local Hospital. All in all, four visits, as I understand it. Because of her concerns C was not satisfied with the treatment that A was receiving and on 13 August 2021 took A to another hospital, where A had been born. On that occasion A was admitted and had a nasogastric tube inserted.

4. As is common practice with such a procedure, a chest x-ray was taken to check that the siting of the tube was correct. That x-ray detected two healing rib fractures of the right 7th and 8th posterior arc. In layman's terms, this is the section of the rib at the back of the chest. The film of the image taken on 13 August can be found in the bundle.

5. The hospital followed usual safeguarding procedures, as the fractures were considered, potentially, to be non-accidental. Social Services were alerted and on 6 September 2021 an interim Care Order was granted to the Local Authority in respect of A. Since their discharge from hospital A has been in the care of their maternal great grandparents.

6. Following on from consideration of the expert medical evidence, the Local Authority confirmed its position that the injuries to A were likely to have been non accidental. Three

people were identified by the Local Authority as being potential perpetrators: C, A's mother; D, the maternal grandmother and E, the maternal grandfather.

7. C is the First Respondent to these proceedings. D has intervener status. Sadly, E committed suicide in 2021. E left a note claiming that it was he who had injured A.

8. Both C and D deny causing any injuries to A. The parties' positions led to a Fact Finding Hearing being listed, which commenced on 22 August 2022, with judgment being reserved to today, 1 September 2022. At the Fact Finding Hearing, the Local Authority were represented by Miss Prolingheuer of counsel. Mother C was represented by Mr Twomey, Queen's Counsel, assisted by his junior, Ms R Wilson. D was represented by Mr Thornton of counsel and the Guardian,

Helen Flower, acting on behalf of the child was represented by Mr McCormack of counsel. Today at the handing down of judgment, Miss Cassidy appears on behalf of the Guardian.

9. In addition to considering the written reports, documents and statements within the bundle, the Court heard oral evidence from Dr Jeremy Jones, the consultant paediatric radiologist, Mr Jeremy Brockelsby, the consultant in obstetrics and feto-maternal medicine and Dr Patrick Cartlidge, a consultant paediatrician from 1990 to his retirement in November 2017. The Court also heard evidence from C, A's mother, and D, A's maternal grandmother. The Court also had the benefit of opening position statements and very detailed notes of submissions from the representatives, and the Court also heard additional oral submissions on the final day of hearing.

1 0. The findings sought by the Local Authority, plus the parties' responses are set out in the bundle at A119 to A130. The Local Authority sought, after hearing the maternal grandmother's evidence, to amend allegation 7(c)(i) which appears at A128 as follows, by way of substitution:

> ***"And on other occasions she had the sole care of A as the maternal grandfather was at work."***

The schedule of allegations relied on by the Local Authority to meet the threshold criteria, for the purposes of section 31 of Children Act 1989, is set out as follows. Allegation 1:

> ***"That the nature of the harm is physical harm. 2. A sustained two posterior rib fractures to the right 7th and 8th posterior arc. 3(a) that the fractures were not sustained at birth or in the neonatal period. (b) were not acute at the date of the first x ray on 13 August 2021 and (c) that the fractures likely were sustained in the window, no earlier than 18 .June 2021 and no later than 30 ,July 2021."***

I I. Allegation 4(a) is:

"That there were no naturally occurring conditions that bad been identified in A to explain the injuries or predispose them to fractures. 4(b) that none of the explanations provided by the parents are consistent with the injuries."

Allegation 5 is:

"That the likely cause of the rib fractures is that they were inflicted and were non accidental injuries."

12. The schedule goes on at:

"5(a) the rib fractures could not have been self-inflicted. Did not occur during normal handling or rough play. (b) the likely mechanism is squeezing forces generated by adult hands applied to the child's chest. (c) the force applied to cause fractures would be obviously excessive to the person inflicting the force and that person would have realised that A had been hurt."

Allegation 6 deals with the likely reaction of A when such injuries were inflicted:

"6(a) that they would be initially painful for them to up about ten minutes and then they would be more fractious than usual for a few days. (b) any person causing or witnessing the injuries would know A had been hurt."

13. Allegation 7 is that:

"The injuries were caused by either the mother, the maternal grandmother and/or the maternal grandfather. The mother was primary carer for A and responsible for their everyday needs."

I have already referred to section 7(c) being amended, being:

"The maternal grandparents cared for A in the relevant period in joint care for periods of up to one hour once or twice a week in the relevant dates and on other occasions the maternal grandmother had care of A as the maternal grandfather was at work. A was in the sole care of the maternal grandfather on 23 July 2021 and 26 July 2021 for a few hours."

14. Finally, allegation 8:

"That neither the mother, maternal grandmother nor maternal grandfather sought immediate medical attention for the injury, notwithstanding they knew that they had hurt A."

C and D in their responses accept the matters set out at allegations 2, 4(a), 7(b) and 7(c) as amended. For the avoidance of doubt, they each deny causing any harm to A as alleged.

15. Their primary position, as set out in their responses, is that they believed A's injuries occurred during their traumatic birth in 2021. The medical records for A's birth record that forceps had to be used. A then presented with shoulder dystocia, meaning that their head had emerged but that their shoulders and arms were wedged inside the birth canal. This necessitated physical internal intervention by medical staff to free the posterior arm to allow the birthing process to continue safely.

16. In his position statement for the maternal grandmother, Mr Thornton has set out a very full note of the relevant principles of the law that the Court must apply and that appears from paragraphs 21 to 30. I am not proposing to repeat those points in full. It is unnecessary to do so. If necessary, a copy of that note, which I understand is not objected to can be appended to this judgment.

17. However, it is helpful to briefly record the principles that this Court must always bear in mind when considering the evidence and making its findings. Firstly, the burden of proof rests with the Local Authority, the Applicant. The Local Authority must satisfy the Court, on the balance of probabilities, that it has made out its case on the disputed facts. Secondly, the Court must be careful not to reverse the burden of proof.

18. It is not for the parent or the Intervener in this case to prove anything. They are not required to disprove anything. Findings must be made based on the evidence and the proper inferences that can be drawn from such evidence and not on speculation or suspicion. The Court cannot conclude that "something" must have happened.

19. The Court must also have regard to all the evidence that is available, commonly referred to as the wide canvas, and the Court must consider each part of the evidence in the context of all the other evidence. Medical evidence must also be considered in the context of all the other evidence. When considering the medical evidence, the Court must bear in mind, to the extent that is appropriate in each case, the possibility of an unknown cause for an injury. If a Court finds that an injury is non-accidental and the perpetrator cannot be identified, the Court must seek to identify the pool of perpetrators on the basis of the real possibility test. That is, is there evidence to establish a real possibility that a particular person was involved. That is set out at paragraphs 29 and 30 to Mr Thornton's note.

The expert evidence

20. The Court heard from the experts on days one and two of the hearing. Dr Jones attended again on day four to answer a question which had been raised by Dr Cartlidge when he gave his evidence. Dr Keenan, the haematologist, had also prepared a report which is within the bundle. Dr Keenan confirmed that there was nothing in the haematological testing to explain A's fractures. Dr Keenan was not required to attend court for cross-examination.

21. Both Mr Brockelsby and Dr Ca1tlidge made it clear in their reports, at the experts meeting and at court that they would defer to Dr Jones' expertise and opinion on the timing of the

fractures. Mr Brockelsby told us that the occurrence of rib fractures during birth was rare. However, when they did occur, approximately 50% of them were linked to shoulder dystocia, and he referred to a report published by van Rijn in October 2008. This set out some findings in relation to a study of some 13 or so births involving rib fractures and their links to shoulder dystocia and clavicle fractures. That document, although not in the bundle, was made available to all parties and the Court during the hearing.

22. Mr Brockelsby confimed that shoulder dystocia means the baby's head has been born, as it were, but the shoulders and hands get wedged in the birth canal and that requires physical intervention in the mother's vagina to pull them out, thereby creating more space for the rest of the baby's body to move out. From the notes of A's birth, Mr Brockelsby confirmed that it had been traumatic. Forceps had been used and an internal intervention was required. He commented that usually shoulder dystocia occurred with bigger babies.

23. When asked, Mr Brockelsby confimed that some force would be required to free the baby's arm during the procedure and possibly, he speculated, that that would increase as the procedure continued, if it was not immediately successful. In his opinion, it would be possible, during this procedure, that the rib cage would have pressure applied to it, as well as the pressure applied to the arm. In A's case, the notes showed that the clinicians were concerned immediately after their birth that their right arm had been broken, indicative of the force that might have been used.

24. Mr Brockelsby was very clear in his opinion that there was a possibility that the mechanism for the fracture of the ribs could have been a result of what had happened at their birth. However, he made it clear that he deferred to the opinion of Dr Jones in relation to the timeline and that therefore the birth was outside the timeline provided for.

He was asked about the issue of a clavicle fracture. He said that it was not always the situation that there was a clavicle fracture in cases where ribs were fractured, and he referred again to the van Rijn report. In that report he noted that some cases had both rib and clavicle fractures, others did not have both. Answering questions about the mechanics of the intervention required, Mr Brockelsby took us through the procedure, which I have already explained, and it was, in his view, certainly possible that during the procedure the rib cage could be compressed.

26. Dr Jones' report is dated 10 November 2021 and appears at E61 to the bundle. It is a thorough and helpful report. His expertise, as a paediatric radiologist, relates in so far as this case is concerned, to the dating of the fractures seen on 13 August 2021. The key question being when were they likely to have occurred?

27. In the executive summary to his report at I.4, he suggested that the fractures occurred around the third or fourth weeks of July 2021 and he suggested a timeframe of between two to four weeks earlier than A's presentation at hospital in 2021.

At 1.5 to the summary, he confirmed his opinion that the injuries could not have occurred at delivery or in the neonatal period. In his opinion, inflicted non accidental injury had to be considered.

28. At E70 to the bundle is a copy of the x ray image of the fractures as they were on 13 August 2021. He refers to this at paragraph 6.2 to his report. At E72, the follow up x ray image, taken on 31 August 2021, is contrasted with the earlier one. At 8.15 to the report is a diagram showing the location of the posterior arc in the rib cage and at 8.17, Dr Jones records that:

> *"Posterior arc fractures are highly specific for child abuse and result from squeezing forces generated by adult hands applied to the child's chest."*

29. Dr Jones' conclusions or opinions are set out at section 9 to his report and at 9.5 he repeats his opinion that:

> *"The fractures occurred two to four weeks prior to the first x ray on 13 August 2021."*

He goes on to state:

> *"These dates are an estimate and an accurate window cannot be given."*

He was, however, confident that the fractures did not occur at birth or in the neonatal period. The healing seen in the x ray films demonstrated the factures had occurred much more recently than A's birth and he set that out at 9.6.

30. There is a note of the experts meeting at E328 to the bundle. During that meeting, Dr Jones revised his estimate on the timeframe for the fractures occurring to between two to eight weeks from A's presentation at hospital in 2021. He explained, in his oral evidence, that at the experts meeting he had been asked to consider the timeline again and he revised his opinion to a point a bit further out, he said, but not as far back as birth. In his experience, birth injuries were extremely rare and clavicle fractures were almost always present when rib fractures occurred. It was his opinion that if a birth injury had occurred, then it would have completely healed by 13 August 2021.

31. In giving his oral evidence, Dr Jones was very honest and stated that:

> *"Dating fractures was not an exact science."*

But he pointed to the recognised stages of healing. On the x ray film of 13 August, he told us that the third stage of healing can be seen, the callus formation. He explained that callus, in his experience, will not usually be seen any earlier than 14 days post fracture, but he did accept that it might be variable. It was not his experience.

32. At the experts meeting there was a discussion about the possibility of refracturing. Dr Jones explained that a healed bone is as good as a new one and therefore a healed bone should have the same structural integrity as the original. Therefore, with a healed bone, the same amount of force would be required to break it de novo, as had been originally used.

33. Answering questions from Queen's Counsel, Dr Jones confirmed that he deferred to Mr Brockelsby's opinion and expertise on the mechanics and possibility of rib fractures occurring at birth. Dr Jones accepted that it was possible A's injuries could have been suffered at birth because of the shoulder dystocia but he pointed out, fairly forcefully, that rib fractures were extremely rare. There had been no clavicle break, as one might expect in the case of A's injuries, and the fractures did not fit within the timeline that he was presenting.

34. Dr Jones explained that with the healing process, callus develops overtime. First the soft callus, then the hard callus, the third stage of healing, and he confirmed that it was his assessment of the development of the callus that had resulted in the timeframe he had set out. This was based, of course, on his expertise and experience of these matters. He commented that:

> *"Different people heal at different rates, so again dating of fractures could not be an exact science."*

35. Dr Jones also accepted, when it was put to him, that there was a degree of subjectivity in assessing fractures, again pointing out that it was not a forensic exercise and that an exact answer was not possible. When he was asked about fracture displacement, Dr Jones did not consider that there had been significant fracture displacement at the time that the injury was likely to have occurred. One of the reasons he gave was that with broken ribs, the ribs themselves have support. When pressed, he said he could not rule out the possibility that the original displacement was different to what was seen some weeks later on the film.

36. Dr Jones did not consider that it was likely that soft tissue bad somehow become interposed in the ends of the bones to delay healing. He accepted that the pleura and the intercostal muscles were present, but he said they would have a protective role rather than a destructive one. He also indicated that in such a case, where there was interposing of tissue, one would expect that soft tissue to have to be removed. Nothing of that nature happened in this case.

37. When pressed by Mr Twomey QC on this point, he confirmed that it was not impossible but would be unusual. Dr Jones discounted the possibility of a foreign body affecting the fractures, because there had been no external injury. He did accept the possibility that the handling of a child could move fracture ends and impede healing.

38. When asked specifically about the possibility of the fractures being sustained at birth, Dr Jones pointed to the evidence that almost all the recorded cases had clavicle fractures too,

but he was very honest and made it clear that he could not absolutely exclude the possibility. However, he did repeat his concerns about why he thought that was not likely in this case. More particularly what he had already said to the Court about fractured ribs at birth being extremely rare, the lack of a clavicle fracture, and the fact that these rib fractures to the 7th and 8th posterior arc did not look like birth injuries .

39. Dr Jones was answering questions from Queen's Counsel when it was put to him that:

> *"A fracture sustained at birth and not completely re-healed by three to four weeks could refracture."*

Dr Jones accepted that that might be the case if force was applied to that same site. He also confirmed that if there were an underlying abnormality of the bone in question, it might make it vulnerable to refracture. However, Dr Jones cautioned about the likelihood of that happening. He said that:

> *"Once the callus was forming at about two weeks, it was replacing and approaching the structure of the bone that it was replacing and the refracture would have had to have occurred in the first couple of weeks when the bone was less solid."*

When pressed by Mr Twomey, Dr Jones confirmed that if a healing fracture were refractured, it was probable that less force would be needed for the refracture because of the fact that the bone was not fully healed.

40. Dr Jones was asked about osteogenesis imperfecta, which I shall refer to as OI, and he said he could not rule that out, although he thought it would be unlikely to have been the cause of these rib fractures:

> *"OI is normally the cause of fractures seen on long bones."*

Answering questions from the Court, Dr Jones made clear that his opinion was that the fractures had occurred between two to four weeks of A presenting at hospital. When he had been asked about the timeline, he had revised his opinion to provide an absolute maximum point to allow for some flexibility, which led to the six to eight weeks extension of time. He referred to this as the:

> *"Absolutely maximum."*

And made it very clear that he did not consider that the fractures could extend back to the birth period.

41. As a result of a comment made by Dr Cartlidge during his evidence, which I will return to later, Dr Jones re-joined the hearing briefly on day four, 25 August 2022. The advocates

had agreed two further questions to be put to Dr Jones and Mr McCormack was nominated to ask those questions. Dr Jones was asked whether, looking at the two images, which we find at E72, the x-rays of the 13th and 31 August 2021, he would expect to see the changes that exist between them if the fracture was already eight weeks old by 13 August? This was a point that Dr Cartlidge had raised.

42. Dr Jones' response to that was clear, no, he would not. He explained that where and what stage the callus was defined was the issue. Soft callus cannot be seen on an x-ray. Hard callus is the material that can be seen on the x-ray and that appears at one to three weeks after the fracture, and that callus is present for about three to six weeks. On the first image, he said the hard callus was between three to six weeks and was healing by the time of the second image. He accepted that the healing period could take up to six weeks.

43. The second question that was put to him was, could he rule out this being a birth injury? Dr Jones made the point that "ruling out" was always a problem, as it involved consideration of many different unlikely scenarios on unlikely scenarios. "*Ifs on ifs*" as I think he put it. I believe he referred to how this had been put to him when Queen's Counsel was asking him questions. However, he said that he could not rule it out 100% but he was very certain and satisfied that it was not a birth injury and he put his own level of certainty about that in the high 90+%.

44. Dr Cartlidge confirmed at court that he deferred to Dr Jones on the timeline for the fractures. He too told us that in his experience rib fractures at birth were rare, and usually associated with shoulder dystocia. He conceded that the fractures may have occurred at birth. It was a possibility, but always subject to the timeline.

45. Dr Cartlidge, as a paediatrician, was giving evidence primarily on what one might expect to see if injuries were inflicted. His evidence on the likely presentation for A was that they would have cried for approximately ten minutes after injury, taking deep breaths and that they were probably more fractious for a couple of days. Dr Cartlidge said that:

> *"The person inflicting the injury would have been aware of inflicting pain but not necessarily that the ribs were broken. Only the perpetrator or someone present at the same time and who saw it, would realise what had happened."*

Dr Cartlidge did not consider it likely that anyone other than the perpetrator would recognise A's additional fractiousness or understand that an injury had been sustained.

46. It was put to him that the history in this case was that A was a quiet baby and easy to settle, but he did not change his view on the likely presentation at all. Dr Cartlidge readily accepted Mr Brockelsby's opinion that some force had had to be applied to A's arm during the birth procedure. He was not so convinced about Mr Brockelsby's opinion that pressure might also have been applied to the rib cage, but deferred to Mr Brockelsby on that point. He also accepted, subject to Dr Jones' timeline, that A's birth process could potentially provide a mechanism for their injuries.

47. When answering questions from leading counsel, Dr Cartlidge agreed with the possible causes of fracture as had been suggested by Dr Jones, save for the suggestion that there could be the potential for a repetitive or repeated stress fracture. Dr Cartlidge made it clear that he had never heard of that before with a baby. He agreed if A had suffered a fracture at birth, that would potentially make them more susceptible to refractures before the first fracture had fully healed. He made it clear that that depended on where they were in the healing process, the instability of the site and on the force actually used. Dr Cartlidge deferred to Dr Jones on the radiological appearance of any refracture.

48. Dr Cartlidge was then asked about Dr Jones' concession that the appearance of a refracture was not inconsistent with what was seen on the x ray film of 13 August 2021. It was clear from his demeanour, during this part of the evidence, that Dr Cartlidge was concerned about this, meaning that the fracture was by that time some eight weeks old and four weeks into the healing process. It was his recollection he said:

> *"That at the experts meeting it had been agreed that four weeks after a fracture occurring the bone would be of good strength by that time."*

His opinion was that a four-week fracture in a new born baby would have healed in that time and would not be particularly vulnerable to refracture.

49. When considering the two images of the ribs taken on the 13th and 31 August 2021, they appear at E72 to the bundle, Dr Cartlidge noted that:

> *"The fracture line had disappeared by the time the second film was taken."*

He said that he was uncomfortable about agreeing that that would happen if the fracture seen on 13 August was already eight weeks old and he posed the question:

> *"Why would there be such a change in presentation between the I3th and 3I August 2021?"*

He said that he would have expected to see much less difference between the films. Again, as he must, he made it clear that he would defer to Dr Jones's opinion and reasoning on that point. That was why Dr Jones was recalled.

50. Dr Cartlidge made a general point that the healing process is the most rapid in young children and young babies and that the process slows as a child gets older. The bones of very young children are more pliable and elastic and are so more resilient than when they get older. He told us that a baby's ribs would not be fractured without a lot of force and gave us an example; even when CPR is administered to babies and the chest cavity is depressed by up to two thirds, fractures are rare.

51. Answering further questions, Dr Cartlidge confirmed that there was no test for bone density in infants, and that anything other than the possibility of mild OI could be ruled out. He was not convinced that OI was present, as there had been no reports of repeated fractures in this child since the first rib fractures and in his view that made any underlying OI unlikely. With respect to E's note, Dr Cartlidge said that it would be reasonable for a person who knew that they had hurt A, and subsequently found out about the rib fractures, to think that they had caused them.

The Parties' Evidence

52. C told us that she had always lived with her parents and her brother and that her family were very supportive, particularly her mother. When she found that she was pregnant she had been really excited about having a baby. She told us that A had given her life a purpose.

53. She explained how close knit all the family were and as far as she was aware, there had not been any problems with A until August 2021 when they became unwell. It was at that stage that C took A to the GP and subsequently to the hospital. She told us that she wanted a second opinion because she was not happy with the First Hospital and what they were doing.

54. C said that A had been a very contented baby. They had developed a very good bond and even though they are not living together at the current time, A knows that C is their mum. C tried to recall what she could of what had happened in the run up to A's hospital admission. She confirmed that she was A's main carer, although her mother was, as she put it, like:

> *"The second parent."*

55. Her father saw A when he was at home. He was working at his office two days a week and for the rest of the time working from home. C described her devastation and shock at her father's suicide in 2021. She said:

> *"There had been changes in him after the fractures had been identified and that he was not himself. For example, he was pacing up and down a lot but that there had been no hint of what he was intending to do."*

She said of his suicide;

> *"It had come out of the blue."*

56. She could not explain why he had done it. She knew of no financial worries or other problems, but did say with respect to the note that was left and the admission of hurting A:

i. *"It's difficult to say because he's my dad but if he wrote it down, he must have done it."*

She explained that E had been her "go to" man throughout her life, helping her, and she knew that she could rely on and trust him.

57. Prior to the injuries being identified, C said that A had been left with her parents when she did some hairdressing jobs, two or three times a week. She thought probably that her mum would be the one to look after A on those occasions. There were two or three occasions, she believed, when A was left with just her dad. One was her mother's 50th birthday, when she and her mum were going shopping for the barbeque stuff that they needed. On another day she remembered going to the toy shop with her mum and a few other shops. It was the day that she bought the pink rocking horse, which I believe we have seen in the photograph.

57. She thought possibly there might have been another time A was left with their grandfather in June 2021, which was a relatives birthday, when she and her mum were running errands. C made it very clear that she had done nothing to hurt A . She told us that she had not believed E 's note initially. She thought he had taken his own life, believing that A would be returned to her. However, she did not believe that now.

58. Even though she had seen the experts reports and understood about the timeframe, C still thought it was possible that the rib fractures were caused by the birth. She told us that she was 50/50, as she put it, in respect of that. She told us too that it was all still very hard for her to take in everything that had happened. Later in her evidence, when it became clear that she was getting a litte bit upset and struggling to deal with what she thought about her father and his note, she said that she did not believe her father had fractured A's ribs at all.

59. Counsel for the Local Authority suggested to C that she might have caused A harm by applying too much pressure, perhaps by accident, then got scared and got "trapped in her own lie," as it were. C was visibly cross at this suggestion and made clear that she had not done anything to A and was not lying. She did not think that her mother had harmed A either.

60. C still believed that it related back to the birth. She said that if D had known anything about what had happened to A, she believed that D would have told the professionals. Finally, answering a question from Mr McCormack, C said that if it was not a birth injury and that is what the Court decided, it must have been E .

61. D confirmed to the Court that there had never been any previous involvement with Social Services, either with her or her children, nor had there been any police involvement with C. She confirmed that she had been taking medication for anxiety and depression for about 20 years or so. She described E as:

"A quiet man and that after August 2021 he had become more quiet and withdrawn."

She said:

"he was pacing up and down, that was not usual for him. He'd lost a stone in weight, which he was very happy to share with the family"

D went on to tell us that:

"His suicide had been a huge shock."

As she put it:

"It broke me."

62. D told us that when she had been told of C's pregnancy, she was over the moon. She said that expecting and having A had changed C and given her focus. She had changed in so many ways. D said she had no worries at all about C becoming a mum. She too described that A had been something of a dream baby to look after and easy to settle.

63. D accepted that she and E had looked after A when C was out on the hairdressing appointments and she also offered, during her evidence, that sometimes she looked after A on her own when E was at work. She remembered two occasions, in July 202 I when A was left with E alone, when she was out shopping with her daughter. She thought possibly there was another occasion when she was with C in June and A had stayed with their grandfather.

64. D described E as a family man who wanted to provide for her and the family and to protect his family. She said that they had, as far as she was aware, a good relationship. She described how their relationship was one where he did most of the money side of things, like paying the bills and sorting matters out. She looked after the home. She was now having to cope with the other side of dealing with things.

65. She was not able to think of anything that had happened which had made her suspicious of anything that E had done. They had spoken, after August, about what had gone on and what could have happened and she remembered that all that she could think of was that it must have been down to the birth. She said:

"I never thought in a million years that he did it."

66. D told us that when she first saw the note, she did not believe that he could have done it. However, she also told us that E was not a man to write something down that he did not mean or was not true. She described him as being a straightforward person who did not lie. She did not believe that he had written the note to try and get A back for them. She admitted that deep down she did not believe he did hurt A, but she said he did not lie and so she accepted what was in the letter.

67. When answering a question from Miss Prolingheuer about why E had done it, it was suggested to her :

"Was it possible he took the blame to protect the family?"

And D answered

"Most likely."

Although some of D's answers about E's note and his intentions were at times confused, when D was asked about whether she had hurt A, she was very clear in her evidence that she had not. She went on to say that she obviously wanted to protect her daughter, C, but would not lie for her. She said:

"I did not cause the injuries to A . That baby's our life. If knew anyone had hurt A, I'd say A comes before C when it comes to the truth."

D told Mr McCormack that if the Court thought it was not a birth injury, she could not be 100% sure that E had done it, but she referred to the note again and what he had written.

68. Answering a question from the Court about E being upset in September 2021, the day of the interim Care Order Hearing. D explained that:

"He had wanted to support C at the hearing, but was told he could not. He was upset and unhappy about this, as he thought it was his job to fix it for his family and to be there for his daughter".

69. It should be noted that there are other assessments and reports within the bundle which are not directly relevant to this Fact Finding Hearing. Those assessments and notes, recited in Mr Thornton's note at some length, are very positive about both C and D, both in the care that they provide for A when they see her, and in their co-operation and engagement with the social workers and the various assessors. There is no indication within those assessments of anything that points to them having been responsible for what happened to A.

70. I agree with Mr Twomey's assessment at paragraph 11 to his submissions that there are five realistic possibilities for A's injuries;-

71. a) that they were caused during the birth process, b) a fracture at birth and refracture before full healing had taken place, c) injuries caused benignly by an unknown process due to an unknown medical condition or undisclosed act, d) injuries inflicted by one identified member of the family e) injuries inflicted by one unidentified member of the family. I agree too that until possibilities a) to c) have been ruled out, the Court does not move on to consider d) and e).

72. As far as the Local Authority case is concerned, the key evidence is that of Dr Jones, with some support from Dr Cartlidge. Mr Brockelsby's evidence, which I have dealt with in some length, was that it was possible that the type of injury A suffered could have occurred at birth. The mechanics were a possibility. It is, of course, the role of the Court ultimately to make the final decision based on all the evidence before it. That was set out in *A County Council* v *K, Dand L* [2005] I FLR 851, particularly at paragraphs 39 and 44.

73. Looking at Dr Jones's evidence, initially it seemed to be quite startling that he changed his estimate for the fractures occurring from two-to-four weeks before the first X ray to six-to-eight weeks. That increased the overall potential period by some six weeks. That revision occurred during the experts meeting on 9 February 2022. Dr Jones referred to it as:

> "*Slightly broadening the potential timing."*

He explained that on reflection he believed that his report read as being quite narrow and hard and that in fairness, he could not be quite so specific in his opinion, and that the revision came about as a result of looking at the variables, such as the rate of healing.

74. Throughout his evidence, he was very certain that A's injuries could not be birth related. He accepted quite properly that he could not be 100% sure. To be fair to him, he indicated that he was over 90% sure:

> *"In the high 90%s."*

He also made it clear that he believed the fractures occurred much nearer to the timing of the first x ray in in August 2021, between two to four weeks as he originally stated. He maintained that the six-to-eight week period was the absolute maximum period that he could rely on. Mr Thornton's timeline at paragraph 38 to his submissions identifies the extended period, i.e. the eight weeks from 13 August as being round about 18 June 2021.

75. On behalf of C , Mr Twomey suggested that this change of mind, based on no new evidence, demonstrated the unsatisfactory nature of the radiological evidence. Dr Jones himself had agreed that it was more an art than a science. Miss Prolingheuer for the Local Authority, at paragraph 18 to her submissions, suggested that Dr Jones' willingness to allow for a longer window so as not to unnecessarily and wrongly exclude it as within the reach of possibility, added weight to his evidence, rather than undermining it. He was prepared to review and reconsider.

76. As Mr McCormack intimated in his submissions, Dr Jones' change of opinion at the experts meeting, without any explanation at that time and without apparently being based on anything new, was perhaps unfortunate. What was clear at court was that Dr Jones maintained his view that the six-to-eight week period was the absolute maximum within which the injuries could have been sustained, but his professional opinion was that he was 90% plus sure that the fractures were sustained as previously suggested, i.e. much earlier in the window based on his assessment of the callus formation.

77. Dr Jones was also asked by Mr Twomey about the possibility of A's ribs being fractured at birth, starting the healing process and then being refractured subsequently, before the healing process had time to complete, that being within three to four weeks of birth. Initially Dr Jones accepted that an original fracture could possibly refracture if force was applied to the same site before re-healing had concluded. He agreed that a healing fracture would probably refracture with less force applied than was needed for a bone that was fully healed. On re-examination on this point, Dr Jones shifted his position on the period that he was considering, indicating that anything concerning refracture would have to occur within two to three weeks of the original fracture, and that this would be outside his maximum eight week timeline by some days.

78. Dr Jones also appeared to change his mind in his evidence when dealing with the window itself and why he had increased it up to eight weeks. When he was recalled on the Thursday morning and the agreed questions were put to him, Dr Jones said that he believed the fracture, in fact, could not be as old as eight weeks after all, because of the level of healing that was demonstrated between the two x ray films, seen in the bundle.

79. It is fair to say that it was Dr Cartlidge who had set that hare running about what level of healing could be seen on the x rays, and the link to the eight-week backstop period. He, of course, is not a radiologist. However, in cases like this it is important and indeed essential that the Court has as full a picture as possible.

80. I make no criticism of Dr Jones for revising his views. It is essential, in my judgment, and entirely proper that expert witnesses challenge themselves and make concessions where necessary. I found him to be helpful and frank, and clearly doing his best to assist the Court. As he had made clear on more than one occasion, the dating of fractures was more of an art than a science and was necessarily a somewhat subjective exercise.

81. C and D gave very straightforward evidence about what can only be described as a shocking series of events for them. First, A being ill. Then the identification of the fractures and the worry of them being in hospital. Then court proceedings, E's suicide, plus us all that has happened in the last ten months or so.

82. They were both very clear and consistent that they did not cause the injuries to A . For what I consider to be obvious reasons, they both found it very difficult to even think that E had hurt A. Their evidence about the note and what they believed was muddled at times, but not for any sinister purpose, in my judgment. They both seemed quite genuinely conflicted about the position when they gave their evidence.

83. It was clear neither of them wanted to believe that a beloved partner, or father, could have done what is set out in the note. It must be devastating to have to even try to cope with all that has happened. I do not find it odd, therefore, as seems to be suggested by the Local Authority, that these witnesses struggled with that part of their evidence.

84. It is true that they both continue to believe that A's injuries are birth related and again, I can understand that and why. They are not making up a scenario. C did have a traumatic birth with A. As I understand it, she was very near to having to have an emergency caesarean. The clinicians feared that A's arm might have been broken in the process. It was obviously a very difficult situation.

85. As noted earlier in this judgment, there has been no evidence produced to this Court to suggest any reason why either of these witnesses would want to hurt A or indeed did hurt A. Dr Cartlidge outlined why a person might be provoked when caring for a young baby and do something by way of loss of control or temper momentarily. Nothing of that nature has been evidenced in this case in respect of these two witnesses.

86. Miss Prolingheuer submitted that the mother and the grandmother had not been honest in what they had reported about A's presentation, contrary to Dr Cartlidge's evidence and what he had advised. The Local Authority suggested that these witnesses must have noticed something. As Mr Twomey pointed out in his submissions, Dr Cartlidge's evidence on what happened after the injuries to A must be purely subjective, bearing in mind each child is different.

87. Mr Twomey made clear, in his submissions, that the Court was bound to look at the possibility of a refracture having occurred. Dr Jones had accepted the possibility and that the image that can be seen on 13 August x ray was not inconsistent with a refracture. Mr Twomey pointed to that being a significant concession. He also reminded me that Dr Jones had said that he could not rule out a birth injury, although he thought it was unlikely.

88. There was no formal evidence, of course, from E , but the suicide note is an admissible document. As the Local Authority have conceded, it is a matter of what weight to attach to that note. The Local Authority position, which is set out in Miss Prolingheuer's note at paragraphs 35 to 40, is that the Court should accord little, if any, weight to it. The Local Authority say that it has no probative value to assist in determining who was responsible for A’s injuries.

89. Mr Twomey's submissions on the suicide note, adopted by Mr Thornton, were unsurprisingly, different; see paragraph 34 to Mr Twomey's written submissions. Mr Twomey suggested that if the Court found A's injuries to have been inflicted, significant weight has to be attached to this note. It is an admission of guilt made in the contemplation of death.

90. Both Mr Twomey and Mr Thornton dealt very fully with the issue of what the Court must consider when assessing whether, in the case of a finding of inflicted injuries, there are identified persons with the opportunity of having harmed A, and whether those identified persons could be moved into a pool of perpetrators. The approach the Court should adopt is set out in *Re B(Children: Uncertain Pe1petrators)* [2019] 2 FLR 2011 and *Re R (A Child)*

[2019] EWCA Civ 895 at paragraphs 26 and 27. Those cases clarify what a court must consider, if there is a finding of inflicted injuries.

91. Firstly, is there a list of people who had the opportunity to cause the injury? If so, the Court must consider whether the actual perpetrator can be identified on the balance of probabilities. The Court should seek but not strain to do so. Thirdly:

> *"Only if the Court cannot identify the perpetrator on the civil standard of proof should it go on to ask of those on the list: 'Is there a real likelihood or possibility that A or B or C was the perpetrator of the inflicted injury?' Only if the Court is satisfied that there is a real possibility of this should A or B or C be placed in the pool."*

There must be no reversal of the burden of proof. The likelihood or real possibility must be proved by the Local Authority.

92. With respect to the injuries A suffered, there is no cogent evidence before the Court to suggest that they were suffered because of an underlying medical condition. Dr Cartlidge and Dr Jones were fairly dismissive of that. Dr Keenan's evidence provided no haematological reason and since the interim Care Order was made, A has not been known to have suffered any further fractures, so the presence of OI is unlikely.

93. The Court must always, of course, be alive to the possibility of the unknown, but on the evidence before the Court there is nothing to suggest an underlying condition as a benign cause of the injuries. Therefore on the balance of probabilities, I find allegation 4(a) proved.

94. I have set out the various opinions and revisions of Dr Jones in some detail. As I have already indicated, I found him to be a good witness. Indeed, all three expert witnesses were helpful and measured and made concessions when appropriate.

95. I have alluded to Dr Jones's change of position on the timeline and the extension of some six weeks, and I have referred to that as being somewhat startling. However, when pressed, particularly by Queen's Counsel, Dr Jones made his position very clear. The six to eight weeks was the absolute maximum he could put the timeline of injury to.

96. That was, as he put it, the absolute maximum but what he believed, and his professional opinion was that the fractures had occurred much earlier in the window. Although he had to concede that he could not rule out a birth fracture, he again made it very clear that that was not his opinion and, indeed, was over 90% satisfied that it was not. He did change his mind about the period for a possible refracture occurring, but I found his response and reasoning for that to be acceptable and fair.

97. All three experts at court confirmed how rare it is for rib fractures to occur at birth. There was some disagreement between Dr Jones and Mr Brockelsby about the importance of a linked clavicle fracture. There was some disagreement between Mr Brocklesby and Dr

Cartlidge as to whether it would necessarily be the case, when freeing an arm by way of intervention, that force would also be applied to the ribcage. However, the thrust of the evidence was how rare such occurrences are. Fractures of the 7th and 8th posterior arc are highly specific for child abuse as described by Dr Jones, caused by squeezing forces generated by adult hands when applied to the child's chest.

I have considered all the evidence and submissions very carefully, particularly those submissions in relation to how the Court should treat Dr Jones' evidence. I must accept his own evidence that radiological dating is not a science. If it were, it might make fact findings rare, as there would be a specific date available for a fracture which would be readily identifiable.

99. I accept that Dr Jones changed his mind on a number of occasions as to timings, but he was trying to answer questions that were put to him. He was trying to clarify what he was being asked. I accept that he changed his mind after giving Mr Twomey one answer in relation to the timings for the refractures and subsequently shortening the period on re-examination. However, in my judgment, that does not make his evidence problematic. The essence of his case and his professional opinion, based on his experience, did not change dramatically. Dr Jones' evidence was that these were not fractures which occurred at birth.

100. Having considered all the evidence and bearing in mind the principles applicable to this case, I am satisfied, on the balance of probabilities, that the injuries identified in August 2021 and seen on the x ray were not caused at A's birth. I accept Dr Jones' consistent evidence that the fractures seen on the x rays occurred no earlier than six to eight weeks before A's presentation at hospital, that being the absolute maximum period and that it is more likely the fractures were sustained between two to four weeks prior to admission.

1O1. As it has been raised, the Court must also consider whether the fractures seen on the x ray in August 2021, could be refractures of an original birth injury. Initially, Dr Jones told the Court that the image seen in August 2021 was not inconsistent with a possible re fracture of a birth injury causing the fractures within a three-to-four-week period. It was on re-examination that Dr Jones reconsidered his answer a little and indicated that the vulnerability to fracture would only be two to three weeks after the original fracture. He maintained, of course, that he did not believe, in his professional opinion, that there had been a fracture at birth.

102. At paragraph 25 to his submissions, Mr Twomey suggested even if the two-to-three-week period for vulnerability was accepted, and then the eight weeks added, it extends the period to eleven weeks, which is just five days short of A's birth date. He suggested it would be folly to ignore that. In considering this point, I have had regard again to Dr Jones' evidence and Dr Cartlidge's evidence, or comment perhaps is a better way of putting it, about the difference between the x rays in August. I have also borne in mind the Court of Appeal judgment in *Kiani v Land Rover Ltd* [2006] EWCA Civ 880 where the court endorsed the Recorder's approach:

"That accidents ... happen in the most unlikely ... ways."

103. However, I am troubled by the suggestion of a birth injury and then a refracture. There was no evidence at all to support that and it is, in my judgment, based on what the experts say about the possibility of rib fractures at birth, adding more unlikely scenarios to unlikely events. There is also the question, it seems to me, of how any refracture would occur in a very small baby, who is non mobile, likely to be spending a fair amount of time in a crib. The evidence before the Court was not conclusive on the level of force that would be required to refracture a healing bone.

104. Considering all the evidence I am not satisfied, on the balance of probabilities, that the images seen on the X ray of 13 August 2021 were refractures of original fractures sustained at birth. I am driven to conclude, therefore, on the balance of probabilities, that these injuries to A were inflicted and were non accidental. Therefore allegations 3 and 5 are proved.

105. With respect to allegation 6, concerning A's presentation, both when the injuries were inflicted and later, on the balance of probabilities, I accept Dr Cartlidge's evidence as to the immediate likely reaction to such an injury, that the baby would likely cry louder for perhaps ten minutes and take deeper breaths.

106. However, I also accept Mr Twomey's submission at court that Dr Cartlidge's evidence on how a child would have reacted over a period of time is more subjective. All children are different and so, therefore, allegation 6(a) is proved, in part. On the balance of probabilities, I accept Dr Cartlidge's evidence that a perpetrator would have known that they bad caused distress or harm to A, but not necessarily that they had broken their ribs, so 6(b) I find proved, subject to that caveat.

107. There are three people identified by the Local Authority as being on the list of possible perpetrators.C , D and E . I have already referred to the evidence that the Court heard from C and D . There is no evidence before the Court to enable the perpetrator to be identified, so the Local Authority must prove that in respect of each identified person there is a real possibility that they caused the harm. It is obvious and, indeed, must be accepted that all three family members had opportunity at various times during the timeframe.

108. Both the mother and the grandmother admit that at times they each had care of A, as did the grandfather on their evidence. It is not clear to me what evidence the Local Authority rely upon to establish that there is a real possibility C and D caused the harm to A. Being muddled in their evidence on the note that E left, and what they think about what E may or may not have done is irrelevant. It seems to me that all the Local Authority can point to is opportunity and as has been set out, very clearly on behalf of both parties, opportunity is simply not enough.

109. I found C to be a credible witness, trying her best in difficult circumstances. I do not underestimate the stress that she would have been under at the court hearing and the fact that she has had to wait the best part of a year to attend court. The fact that her account of

her father's behaviour after August 2021 differed to her mother's account frankly takes the court no further forward. In fact, the discrepancies themselves were minor. Both witnesses recalled him pacing; he had lost a stone in weight and that he was a bit quieter than normal.

110. I find that C's attitude to her father's note is understandable. Who would want to have to accept the possibility that your own father has hurt your child and caused all the ensuing problems. In her closing submissions, at paragraph 48, Miss Prolingheuer had set out a possible scenario of how C might have come to injure her child but C denied that very strongly when giving her evidence.

111. The fact is that all we know about C prior to these proceedings, is that when A was ill, she moved heaven and earth to get proper treatment for them. If she had, indeed, hurt her Child at an earlier stage and recognised that she had done so, is it likely that she would have been so insistent on getting treatment for A and possibly run the risk of being found out? I find that to be implausible.

112. Considering all the evidence, I am not satisfied, on the balance of probabilities, that the Local Authority have proved that there is a real possibility that C caused the rib fractures that A suffered.

113. D was, in my judgment, a credible witness, trying to assist the Court. One must bear in mind the enormous stress court proceedings have for individuals who are not used to the process.

114. D was obviously conflicted about the note that had been left by her late partner and whether she could or should believe it, knowing him as she did. She strongly denied any wrongdoing with A and made it crystal clear to the Court in what she told us, that A was her priority, and that she would not lie for her daughter C. She told us too that if she had known anyone who had hurt A , she would have said so, and I believe that evidence.

115. If she had hurt A herself, is it plausible that she would have stayed silent all this time, allowing C to have her own child taken away with the uncertainty about what might happen in the future? Frankly, I find that implausible. D will have been aware, no doubt, of the likely final orders that this Court could make if she were to continue a lie in the face of that, and I do not accept that she was lying to this court. I believe D's evidence. I accept that she did not hurt A . On the balance of probabilities, therefore, I am not satisfied that the Local Authority have proved that there is a real possibility that D caused harm to A .

116. The position of E is unusual for many reasons. No formal evidence, of course, has been taken from him, but the Court has seen the note that he left and what he said about A in that note:

> *"I was the one who hurt A and broke their ribs. At least you can all be back with A now."*

The question for the court is therefore, whether there is a real possibility that E caused A's injuries.

117. The Local Authority have suggested that the note is of little probative value. However, it is all that the Court has from E and in one respect, certainly in my judgment, it is very important. After writing that note, sadly, *E* went on to take his own life. He must have had a reason for doing so from what we know of him. I accept, of course, that this court cannot determine and should not attempt to determine why E did what he did, but the note must be viewed as an important part of the evidential jigsaw, which was referred to by Mr McCormack.

118. In my judgment, this note cannot be ignored. It is enough to suggest a real possibility that E caused the harm to A. It follows therefore that allegations 7 and 8 are not proved insofar as they relate to C and to D . The Court finding is that there is a real possibility E caused the injuries, but on the evidence the Court can take it no further than that. Judgment concluded.