Khoo Bee Keong v Ang Chun Hong and Another
[2005] SGHC 128

Case Number : Suit 872/2004

Decision Date : 21 July 2005

Tribunal/Court : High Court

Coram : Andrew Phang Boon Leong JC

Counsel Name(s) : Jimmy Yap Tuck Kong (Ngaw Tan and Yap) for the plaintiff; Abdul Salim A Ibrahim (Assomull and Partners) for the defendants

Parties : Khoo Bee Keong — Ang Chun Hong; SBS Transit Ltd

Evidence – Weight of evidence – Pedestrian hit by bus at pedestrian crossing at traffic junction – Two diametrically opposed versions of accident – Whether plaintiff's or first defendant's version objectively more probable

Tort – Negligence – Contributory negligence – Pedestrian hit by bus at pedestrian crossing at traffic junction – Pedestrian attempting to cross without checking whether safe to cross – Whether pedestrian guilty of contributory negligence – Apportionment of liability between bus driver and pedestrian – Section 3(1) Contributory Negligence and Personal Injuries Act (Cap 54, 2002 Rev Ed)

21 July 2005

Andrew Phang Boon Leong JC:

Introduction

1 Truth, it has been said, is stranger than fiction. This is nowhere better exemplified than in the present proceedings. Indeed, if a label were necessary, the entire saga could not inappropriately be entitled "Of Stray Dogs and Accidents". As we shall see, it would not be inaccurate to add ", With Experts" as well.

2 It was a clear night along Tampines Avenue 10 on 8 September 2003 at approximately 9.15pm. The plaintiff had just completed what appeared to be a regular jog around Bedok Reservoir and was returning to his company premises. He had presumably done this numerous times before. Tonight, he also had two "companions". They were two stray dogs that had somehow become "part" of the company in which he worked. They were in fact two of a larger group of approximately six dogs. In the nature of things, they belonged to no particular person, let alone the company. Not formally, in any event. But they had a "relationship" of sorts with the company and were, in fact, periodically fed and even bathed by employees in the company (albeit not by the plaintiff).

3 The dogs in question obviously recognised the plaintiff. Indeed, he stated that when the dogs spotted him going for a jog, they would occasionally "accompany" him. This was one such occasion. As we shall see, one of them is alleged to have played a crucial role in the present proceedings – at least in so far as the defendants are concerned.

4 So much by way of a brief prologue. The actual events which are the subject matter of the present hearing are unfortunate in more ways than one. This should not be surprising as this case involved a traffic accident.

5 There are, not surprisingly once again, two versions of the accident in question. Both are of course diametrically opposed to each other. What is clear is that the accident involved an SBS Transit Bus ("the bus", which was driven by the first defendant) and a pedestrian (the plaintiff), as

well as one of the stray dogs. The bus had collided into both pedestrian and dog at a traffic controlled junction along Tampines Avenue 10. The issue before the court was whether or not the bus driver or pedestrian or both were at fault.

6 I found that the first defendant was substantially to blame for the accident and apportioned liability in the proportion of 80% to 20% in favour of the plaintiff. The liability of the second defendant, the first defendant's employer, is therefore also established accordingly and in the same proportion. The defendants are dissatisfied and have appealed against my decision. I now give the detailed reasons for my decision.

The plaintiff's evidence considered

7 The plaintiff[1] claims that he was just starting to cross Tampines Avenue 10 when the bus concerned failed to stop at the junction in question and negligently collided into him as well as one of the dogs. More importantly, he claims that the traffic lights were green in his favour and red as against the bus.

8 As a result of the accident, the plaintiff sustained severe injury, especially to his leg. Unfortunately, the dog was killed. The left side of the windscreen of the bus was badly shattered. Fortunately, though, neither the bus driver nor any of the passengers on the bus was injured.

9 According to the plaintiff, he had proceeded to the traffic junction in question and waited for the cars on his side of the road to stop and for the green man to appear before he crossed the road. He had only noticed the bus when he had stepped onto the road; in his words:[2]

> When I stepped onto the road proper, I turned and looked toward my right and I saw the bus.

10 The plaintiff also clarified that the cars in the other two lanes had already stopped when he first saw the bus which was travelling in the extreme left lane. He also stated that the bus was approximately 8m away from him when he first saw it. He further stated that the bus was coming at him at a very fast speed.

11 When asked by counsel for the defendants, Mr Salim, why with the bus about 8m away when he (the plaintiff) first saw it travelling at a fast speed, he thought it would stop, the plaintiff replied thus:[3]

> Because the cars in the first and second lanes had stopped and the green man had come on, so it had to stop.

12 The plaintiff admitted, under cross-examination by counsel for the defendants, that whilst looking at the other cars in the other lanes coming to a stop, he did not look at the first lane (the lane in which the bus was travelling and onto which the plaintiff stepped and where the accident took place). In his words, "[w]ithin my scope of vision, there was no car".

13 More importantly, in answer to counsel for the defendants' question as to whether or not *before* he stepped onto the road, he (the plaintiff) had looked to his right towards the first lane, the plaintiff answered "No".

14 There then followed what, in my view, was an important exchange between counsel for the defendants and the plaintiff, extracts of which are now reproduced:[4]

Q: Before you stepped onto the road, did you look to your right towards lane 1?

A: No.

Q: Why not?

A: Because the cars on the second and third lane had stopped and the green man had appeared.

Q: But as a prudent pedestrian, wouldn't you first check whether all the cars had come to a stop, especially the car which would be closest to you before you start crossing?

A: No.

Q: Can you explain? A prudent pedestrian shouldn't even look?

A: The cars in the second and third lanes had already stopped and the green man had appeared and that was the time when as a pedestrian I can cross.

Q: If you had looked at lane 1 before crossing, do you agree you could have seen the bus?

A: Yes.

Q: If you had seen the bus which was occupying the lane closest to you, you most probably wouldn't have crossed the road, right?

A: Yes.

15 Although the plaintiff's testimony in this regard was detrimental to his case inasmuch as it was clear evidence of contributory negligence on his part, I was impressed by the fact that he, nevertheless, did not attempt to evade counsel for the defendants' questions. This was, in fact, representative of his basic attitude and demeanour throughout. I found the plaintiff to be straightforward and a witness of truth.

16 Another crucial aspect of this case in general and the plaintiff's testimony in particular centred on two related aspects – the relationship between the plaintiff and the dead dog and the precise actions of the dog, respectively. Both these aspects are inextricably linked together and are best described as well as analysed as a whole.

17 I note, at the outset, that the fact that the plaintiff did not attempt in any way to evade this issue with respect to his relationship with the dog confirms my earlier observations to the effect that he was a reliable witness of truth. Indeed, when I asked him if he recognised this particular dog, he answered in the affirmative, stating that the various dogs could be distinguished by their different shapes and colours.[5]

18 It is clear from the evidence that there were *various degrees* of relationship between the other employees of the plaintiff's company (including the plaintiff) on the one hand and the group of stray dogs which considered that company a "home" of sorts on the other. For example, some employees would even go to the extent of giving the dogs concerned periodic baths.[6]

19 The plaintiff's own relationship with the dogs was somewhere in-between. He mentioned that,

on occasion, albeit not always, one or more dogs might follow him when he jogged (as was this case on this particular occasion).[7] He also mentioned that he would occasionally give them food. Specifically, in answer to my question to clarify what his relationship was with the dogs, the plaintiff replied, "If there is leftover food, I will give it to them."[8] Would this, however, entail the plaintiff risking his life chasing after the dog who suddenly (as the first defendant alleged) dashed across the road?

20 I have dwelt on the relationship between the plaintiff and the dogs, particularly in the context of his jogging routine, at some length because it is the defendants' (in particular, the first defendant's) case that the plaintiff had dashed out suddenly onto the road and into the path of the bus that he (the first defendant) was driving, *against* the traffic lights, in order to chase after (and save) the dog which had dashed out onto the same road moments earlier.

21 The relationship between the plaintiff on the one hand and the stray dogs (in particular, the dead dog) on the other is therefore a crucial link in this particular case. This did not, however, seem to me to be a relationship that would entail the plaintiff risking his life chasing after the dog who suddenly (as the first defendant alleged) dashed across the road. Besides, the dog was not on a leash. It was, after all, a stray dog. There was some mention of a collar but the evidence here was inconclusive although I am of the view that it was, in any event, by no means a collar that contained a dog licence. Again, it bears repeating that this was a stray dog. Hence, logic and common sense lead to the inexorable conclusion that the dogs in general and the dead dog in particular were allowed to do as they wished.

22 Indeed, it would not be stretching one's imagination to say that, if the defendants were right in their allegation with respect to the plaintiff's self-sacrificial love for the dogs, the plaintiff must have risked his life many times for the sake of the dog's safety on the roads and it is incredible that he had not hitherto met with an accident. If, in fact, the plaintiff had been so solicitous of the dogs' safety, he ought to have put them on a leash each time they accompanied him for a jog. But what if, as the plaintiff himself stated, there was more than one dog (which the first defendant himself alleged to be the situation here)? More importantly, why would the plaintiff wish to encumber himself with one or more leashes for the dogs when it appeared that his sole purpose was to jog unencumbered by anything – let alone dogs on leashes? It is true that it is possible that if a dog were very well trained by its master, it might not require a leash when accompanying its master on jogs or walks. However, it is clear that the plaintiff did not have that degree of closeness to the dogs in general and the dead dog in particular.

23 There is also the *first defendant's* allegation that there was a *second* dog, which had "crossed" the junction earlier. Why did the plaintiff not ensure that both dogs were together and why did he not risk his life to chase that (second) dog? Perhaps it had run on ahead – as did the (first) dog. Indeed, the first defendant's allegation with respect to the second dog only reinforces my conclusion above to the effect that the plaintiff's relationship with the dogs generally was a very loose one and, *a fortiori*, could not even remotely be described as being of that level of self-sacrifice which must be present if the first defendant's version of the accident is to be believed.

24 It follows that the first defendant's version of the accident – in particular, that the plaintiff had suddenly dashed across the road to chase (and presumably "retrieve") the (first) dog – is inherently improbable and against the weight not only of the evidence and context but also common sense.

25 It is appropriate to note, at this juncture, that counsel for the plaintiff, Mr Yap, had in fact objected to the defendants including this version of the accident (*ie*, that the plaintiff had suddenly

dashed across the road in pursuit of the (first) dog) in evidence as it did not arise on the pleadings. In the light of my findings, I find it unnecessary to deal with this particular objection.

26 It is, however, necessary to turn now to analyse the first defendant's evidence in order to ascertain whether or not, notwithstanding the relative strength of the plaintiff's case up to this point in time, the overall strength of the defendant's evidence is such that his (the defendant's) case ought nevertheless to prevail.

The first defendant's evidence considered

27 The plaintiff's and the first defendant's respective accounts as to how the accident occurred are as different as proverbial chalk and cheese. The plaintiff was adamant that he was merely waiting to cross the road and did so when the green man came on. The first defendant, on the other hand, maintained that the plaintiff had dashed across the road against the traffic lights which were green in his vehicle's favour, presumably to save the dog which had itself dashed out onto the road moments earlier. In particular, the first defendant maintained that the traffic lights were green in his favour and that it was the plaintiff who had suddenly dashed out in front of the bus he was driving as the bus itself crossed the white stop line, chasing after the dog which had dashed out a moment earlier.

28 The main thrust of the first defendant's case is clear and is confirmed by his very own words as italicised below (at [32]). Clearly understanding its underlying sequence as well as logic is of the first importance. The first defendant claimed that the traffic lights were in his favour and that he kept a proper lookout. If this was so, the only way he would be totally blameless would be if the plaintiff had suddenly dashed out from the kerb and into his path in running after the dog, giving him no time to avoid a collision with both the dog as well as the plaintiff.

29 When asked by counsel for the plaintiff what he would do when he approached a junction, the first defendant maintained that he would take his foot off the accelerator and be prepared to brake. The first defendant also maintained that he was travelling at a speed of 40km/h. He also stated that he had kept a proper lookout as his vehicle approached the junction where the accident took place. Looked at in this light, it was crucial to the first defendant's case that the plaintiff had been running after the dog at the pedestrian crossing and the first defendant admitted, under cross-examination by counsel for the plaintiff, as much (and see the words italicised at [32] below).[9] Presumably, the suddenness of the actions of both dog and plaintiff gave rise to the accident and absolved, so the argument went, the first defendant from any legal blame. However, as a point of pleading, counsel for the plaintiff was at pains to point out that this fact had been mentioned neither in the first defendant's police report nor in the Defence itself. This is a point to which I have in fact already dealt with above (see [25]).

30 The first defendant also stated that he had seen another dog run across the road whilst he was still a distance away. This was, allegedly, another dog which had run across the junction prior to the first dog which the first defendant's bus subsequently collided into. I pause here to observe that, if this was so (and it is significant that the point was being made by the *first defendant*), then it is strange that the plaintiff had not seen fit to run after this (second) dog as well. There was in fact no evidence as to whether or not the plaintiff preferred one dog over the other. Indeed, as I have already observed above, there was a very simple answer to the questions posed in this paragraph and which I have already dealt with in some detail above (see [17]–[22]). Put simply, it is that the plaintiff really did not care especially about the dogs. To be sure, he did not mind them following him on his jogs, but he certainly did not, on the available evidence, demonstrate any degree of supervision, let alone self-sacrifice, for them.

31 The first defendant's evidence, it will be seen, still rested, in the main, on his evidence to the effect that the plaintiff had suddenly rushed across his path in pursuit of the dog which had also rushed across his path a moment earlier. The importance of this argument was underscored by the following exchange between counsel for the plaintiff and the first defendant:[10]

> Q: When you approached the junction where the accident took place, did you notice the plaintiff?
>
> A: No, I didn't. I did keep a lookout.
>
> Q: Did you notice the plaintiff?
>
> A: No.

32 A little later on in the same exchange, the following exchange occurs:[11]

> Q: In other words, you weren't paying attention to the possibility of anyone crossing the junction?
>
> A: I didn't notice that.
>
> Q : *You have through your solicitors put forth a line of defence that the plaintiff was running after the dog at the pedestrian crossing. Is it important for your defence that the plaintiff was running after the dog at the pedestrian crossing?*
>
> A: *It is*.
>
> [emphasis added]

3 3 *However*, as I have held earlier, when considering the plaintiff's evidence, this particular argument is inherently improbable and against the weight of the objective evidence and, indeed, common sense. Looked at in this light, his other arguments (briefly set out above) are, with respect, mere assertions.

34 It is important to pause here to note that the first defendant's demeanour was not *obviously* one that suggested unreliability or evasiveness. On balance, however, I found him to be a less reliable witness than the plaintiff. In particular, his responses were apparently well rehearsed – especially with regard to his deliberate and repeated emphasis on the safety measures laid down by his employers (the second defendants) and which he had (allegedly) adhered to. I also note that the witness demonstrated an almost "plateau-like" demeanour in response to the various questions posed to him, particularly in cross-examination. Indeed, it might be stated that the witness was unnaturally "calm".

35 In any event, it should be noted that whilst the factor of demeanour is an important ingredient in the process of ascertaining a particular witness's credibility, it is not a fail-safe. In situations such as the present, where the witness's demeanour is not obviously inferior to that of the other party, the *objective factual matrix and the objective credibility in the witness's own account of the material events* may – and, here, did – tip the scales. Given the fact that the entire process, particularly the ascertainment of the witness's demeanour, even at first hand, is not a scientific process, the infusion of a not insignificant measure of objectivity in the form just mentioned may not only be desirable but may even be imperative.

36 Turning to the specific facts of the present case, it bears repeating that the main crux of the defendants' case centred on the suddenness with which both the dog and the plaintiff had appeared like a bolt from the blue although the traffic lights were in the first defendant's favour. As I have already stated, given the overall evidence, this argument was inherently incredible.

37 Finally, it is also significant to note that the first defendant admitted, in cross-examination by counsel for the plaintiff, that there was, behind him, a full height driver's partition which was opaque and through which passengers could not see.[12] He also confirmed that this partition was slightly wider than his seat, albeit not almost half of the width of the bus as suggested by counsel for the plaintiff.[13] He further confirmed that there were both vertical poles in the middle of the bus as well as horizontal handrails along the vertical poles.[14] This evidence was very relevant as it impacted on the line of vision or sight of the passengers who were his witnesses and whose evidence I consider below (see generally at [60] *ff*).

The evidence of the witnesses considered

38 It must be stated at the outset that, for various reasons set out below, I found the testimony of the witnesses to be rather unsatisfactory.

The evidence of the plaintiff's witnesses considered

39 There were three witnesses for the plaintiff and I turn now to consider their respective evidence.

40 Turning, first, to the testimony of Mr Lim Chuee Wat ("PW1"), an independent witness on behalf of the plaintiff, it was clear that he was a reluctant witness. He was clearly uncomfortable in a court setting and took a while to become "acclimatised". He also appeared to be a little taciturn by nature. This explained the seeming contradictions in his initial testimony – particularly with regard to the position of his car in relation to the bus driven by the first defendant. In addition, the reference by counsel for the defendants to various roads and landmarks without (for the most part) furnishing any real context could also have confused the witness and would most certainly have exacerbated an already difficult situation in so far as PW1 was concerned.

41 More importantly, the following exchange between PW1 and counsel for the defendants perhaps explains why the former's testimony smacked, as already mentioned, more of reluctance than enthusiasm:[15]

> Q: When did the plaintiff ask you to give evidence?
>
> A: I often met Thomas [the plaintiff's colleague] who said [his] friend [*ie*, the plaintiff] wanted to ask me to be his witness. *I declined because I was afraid it was troublesome. But subsequently I agreed*.
>
> Q: When and why did you agree?
>
> A: About a few months after the accident because I was an eyewitness and was asked to help.
>
> [emphasis added]

42 Although this particular witness did not appear enthusiastic, to say the least, I cannot

accept counsel for the defendants' submission that, according to his client, the witness had never been at the scene of the accident and that his evidence was therefore a total fabrication. Indeed, his testimony was infused with his own natural characteristics, as described briefly above, and, to that extent, appeared therefore to be infused simultaneously with the ring of truth. Hence, I find that PW1's testimony supports the case for the plaintiff.

43 The plaintiff's second witness was his colleague, Mr Teo Leong Hui ("PW2", and also known as "Thomas" (see [41] above)). He was in fact instrumental in locating PW1, whom he claimed he did not know but whom he had seen previously at the coffeeshop.

44 PW2 claimed to have arrived at the scene of the accident at around 9.30pm. Although PW1 had testified that he had not spoken to PW2 at the scene of the accident, the latter maintained that such a conversation did in fact take place.

45 Counsel for the defendants sought to cast doubt on PW2's testimony by querying the latter's decision to inform the plaintiff about PW1 only six months after the accident, despite visiting the plaintiff at the hospital and also having the means to phone him (the plaintiff) earlier.

46 PW2 also shed some light on the relationship between the stray dogs and the employees of his company.

47 In response to a question by counsel for the defendants, PW2 responded thus:

> This dead dog was very friendly. It did not have a particular owner. There are many stray dogs. This dog would follow us.

48 And, in response to questions with a view to clarification from the bench, PW2 gave the following answers:[16]

> Ct: Witness said dog was quite friendly – what was the relationship like between the workers and the dog?
>
> A: Sometimes if we have extra food we would feed it – sometimes I or the plaintiff or someone else would bathe the dog.
>
> Q: Would you give orders to the dog?
>
> A: When I'm free I will play with the dog.
>
> Q: Is the dog obedient?
>
> A: Quite. Whether or not it obeys depends.

49 PW2's evidence, in so far as the stray dogs are concerned, is wholly consistent with that given by the plaintiff and which has been described briefly above.

50 I found PW2 to be a witness of truth. Although he did not inform the plaintiff about PW1 earlier, he appeared to me to be a rather reserved man who, whilst knowing the plaintiff, would not naturally take the initiative to approach the plaintiff. Indeed, PW2 stated that he informed the plaintiff about PW1 only after next meeting the plaintiff after he had been discharged from the hospital and he (the plaintiff) visited the company premises.

51 The plaintiff's remaining (third) witness was an *expert witness*, Mr Liaw Leong San Jayson ("PW4"). Unfortunately, I did not find either the report by, or the evidence of, this witness particularly helpful. This was, I hasten to add, not due to any fault on the part of the witness himself. This was due, in the main, to the fact that the accident itself was, in essence, "simple", albeit with unfortunate results, especially where the plaintiff was concerned.

52 The most helpful evidence given by PW4 was in fact given during re-examination by counsel for the plaintiff. In response to a question by the latter as to whether the crack on the windscreen of the bus driven by the first defendant would be a telltale sign of the speed at which the bus was travelling at the material time, PW4 expressed the view that it was *not* a *low speed* impact (*ie*, in his view, one in the range of less than 40km/h).[17] PW4 further testified that the spot where the windscreen of the bus was shattered was "about the height of a man".[18]

53 In response to a question by counsel for the defendants as to whether or not his view would be any different if he had learnt that there had been no glass fragments or debris, PW4 responded in the negative; in his view:[19]

> Not necessary for the glass to fall off. If there were fragments the speed would have been even higher. [emphasis added]

54 In *summary*, the overall evidence of the plaintiff's witnesses was persuasive, albeit not compelling. However, it is clear that the evidence did not contradict the plaintiff's own evidence and, in some ways, did in fact buttress it.

The evidence of the defendants' witnesses considered

55 In addition to the first defendant,[20] there were six witnesses for the defendants and I now turn to consider their evidence.

56 The defendants' first witness was Ms Chong Mui Fong ("DW1"). She was in fact the investigating officer. She helpfully produced both a sketch plan as well as photographs. She also confirmed that there had been no skid marks, brake marks and no glass fragments or other debris at the scene of the accident.[21]

57 The evidence of DW1 was helpful inasmuch as the photographs, in particular, clearly confirmed that the left side of the windscreen of the bus was badly shattered. This, in turn, clearly confirms that the bus had collided into the plaintiff not long after he had stepped off the kerb.

58 The fact, however, that there were no skid marks, brake marks or other debris at the accident is understandable in view of the fact that the first defendant's bus had collided into a pedestrian, the plaintiff.

59 The defendants' second witness was Mr Jeffrey Lim.[22] He was the service manager for Tyco Building Services. He explained the traffic light sequence for the junction in question. Whilst helpful, what is crucial is the precise positions of the respective vehicles. Unfortunately, it was by no means clear what these positions were. Indeed, where the first defendant's bus was at the material time was itself (as we have seen) a fact in dispute. Not surprisingly, counsel for both the plaintiff as well as the defendants tendered diametrically opposed arguments based on the traffic light sequence.

60 The defendants' third witness was Ms Suraiya d/o Hj Chrag Din ("DW4"). She was one of two witnesses who were passengers on the bus driven by the defendant at the material time. It is

significant, in my view, that the witness was seated on that side of the bus that was blocked by the full height driver's partition. Further, the witness was behind her son whom she admitted was taller than she. In so far as this last-mentioned point was concerned, the witness stated that her son was "seated slanted".[23] The view from this particular vantage point was anything but clear. Added to this was the fact that the witness had bent down to retrieve a sweet for her daughter who was sitting beside her. Despite the fact that the witness insisted that she had seen the traffic lights and that they were green in favour of the bus in which she was travelling, this was yet another distraction. Even allowing for the fact that the witness was (unfortunately) feeling a little unwell at the time she gave her evidence, the overall factual matrix did not comport with her version of events, especially since she had been distracted and her line of sight was far from clear.

61 The fourth witness for the defendants was the second of the two passengers on the bus, Mr Abdol Talib bin Jaffar ("DW5"). This particular witness, like DW4, was sitting on the same side of the bus as the driver, the first defendant in the present proceedings. His line of sight was therefore also impaired, in my view. The response by the witness to a question by counsel for the plaintiff during cross-examination was thus rather strange:[24]

> Q: You seem to have the habit of observing traffic lights and traffic conditions at the junctions? Is that a habit of yours?
>
> A: At that time I was going to work, so while I was sitting I looked straight. When I was looking in front I saw the traffic light.

62 Again, bearing in mind that the full-height driver's partition was in fact opaque, the following response by DW5 during cross-examination by counsel for the plaintiff was, with respect, less than convincing:[25]

> There were obstructions, I agree, but that did not block my view altogether. Also, the partition behind the driver, it was a glass panel. I could see the driver and his head also.

63 At this juncture, the very pertinent observations by Julie E Bates & John T Bates, "Accident Reconstruction" (1988) 55 Defense Counsel Journal 437 at 443, are apposite (in so far as the evidence of the third and fourth witnesses for the defendants is concerned):

> Witnesses sometimes think they see things that were not possible for them to see. Because an unbiased witness often has such a persuasive impact on a jury [the writers were writing in the US context], the reconstruction expert can be vital in proving … precisely what happened, in spite of the contradictory testimony of an eyewitness.

64 Indeed, the importance of the *objective* evidence and factual matrix cannot be over-emphasised.

65 The fifth witness for the defendants was Mr Tan Young Hwai.[26] He gave evidence with respect to the *speed limiter* on the bus the first defendant had been driving which apparently limited the speed of the bus to 60km/h (and see generally the Road Traffic (Motor Vehicles, Speed Limiters) Rules (Cap 276, R 39, 2001 Rev Ed)). However, even if I accept that the bus could not have exceeded 60km/h, the fact of the matter was that the speed limit at the material time was 50km/h. It also does not confirm at *what* specific speed the defendant was driving the bus. Still less does it confirm whether or not the traffic lights were in favour of the first defendant.

66 The sixth and final, witness for the defendants was Mr Tay Beng Hee ("DW7"). He was in fact

the defendants' *expert witness*. Like the plaintiff's expert witness (PW4), I did not, with respect, find either his report or evidence particularly helpful. Indeed, the evidence I found most helpful, which was the VCD which was made by DW7, confirmed my view above (at [60] and [61]–[62], respectively) to the effect that it would have been extremely difficult for DW4 and DW5 to have had a clear view of the traffic conditions in front of the bus in which they were travelling. DW7 attempted to get round awkward questions put to him by counsel for the plaintiff in relation to this particular difficulty but, I am afraid, with little success.[27] In fairness to this particular witness, though, what I had observed earlier with regard to the plaintiff's expert witness (PW4) holds true for DW7 as well. And it is that the comparatively "simple" factual scenario left little room for the introduction of substantive expert evidence which was truly helpful as such (*cf* also *Halsbury's Laws of Singapore* vol 10 (Butterworths Asia, 2000) at paras 120.238 and 120.241).

67 In *summary*, the overall evidence by the defendants' witnesses was not very helpful to their case at all. In the circumstances, we are cast back to the quality of *the first defendant's* evidence, which I have already considered above (at [27]–[37]) and which I in fact consider unsatisfactory.

A note on expert evidence

68 It is important to ascertain what precisely constituted the *basis* for the respective expert reports (and see generally Jeffrey Pinsler, *Evidence, Advocacy and the Litigation Process* (LexisNexis, 2nd Ed, 2003) at pp 185–187, 553–554 and 646–647; *Halsbury's Laws of Singapore* ([66] *supra*) at paras 120.256 and 120.258; *Sarkar's Law of Evidence* (Wadhwa and Company, 15th Ed, 1999), vol 1 at pp 878–880; *Sir John Woodroffe & Syed Amir Ali's Law of Evidence* (LexisNexis Butterworths, 17th Ed, 2002), vol 2 at pp 2520–2530; Tristram Hodgkinson, *Expert Evidence: Law and Practice* (Sweet & Maxwell, 1990) at pp 136–138; and Ian Freckelton & Hugh Selby, "The Basis Rule" in Ian Freckelton & Hugh Selby, *The Law of Expert Evidence* (LBC Information Services, 1999) at ch 5; and see, by the same authors, *Expert Evidence* vol 1 (The Law Book Company Limited, Looseleaf Ed, 2001) at ch 11). It is both logical and commonsensical that if the basis or starting-point is either shaky or (worse still) flawed, the conclusion arrived at will be of little or no use to the court. Indeed, if there is in fact something untoward in the starting-point, even the most impeccable reasoning process will be of no avail in so far as the quest for a fair and just result is concerned. This principle is of particular importance with respect to expert reports generally – and especially in the present context of traffic accidents. Unfortunately, however, the general provisions with respect to expert evidence, ss 47 and 48 of the Evidence Act (Cap 97, 1997 Rev Ed), do not furnish us with specific guidance in this particular regard.

69 Both experts in the present case in fact relied upon the available affidavits of evidence-in-chief ("AEICs") – from *all* of the witnesses. They also relied upon the Writ of Summons and the Defence, as well as the respective police reports by the plaintiff and the first defendant. This was the documentary base and constituted, as far as I could see, the main basis for their respective reports.

70 In addition, both experts also visited the accident site to gather evidence and information as well as to produce video clips.

71 I have set out the respective bases for each of the reports. Both reports were in fact similar in approach and even form. Whilst one might, quite legitimately in my view, point to the fact that these were the only "raw materials" available to the respective experts, a moment's reflection will reveal that the basis in each would, with respect, be far from satisfactory.

72 I have in mind, in particular, the reliance by both experts on the available AEICs.[28] Whilst the respective AEICs are useful (and indeed efficient) as the points of departure for cross-

examination of their respective deponents, they are in fact simply that – material, albeit given under oath, that has to be subjected to testing (often severe testing) on the anvil of cross-examination. In other words, the "raw material" upon which the respective experts in the present case relied was *itself untested* at the time it was in fact utilised to produce their respective reports. It should also be borne in mind that this particular category of material constituted an extremely significant part of the basis of the reports themselves. One can immediately see the difficulties that would inevitably arise, especially since such material would *further* be, of necessity, *interpreted* by the experts themselves as they formulated their respective reports.

73 In all this, I must not be taken to be questioning in one whit the good faith and, indeed, conscientiousness, of the respective experts. I have, in fact, already admitted that the utilisation of the AEICs was inevitable in the circumstances (and compare Hodgkinson ([68] *supra*) at p 163. However, from an objective perspective, there is much caution that needs to be exercised in interpreting the resulting reports for the reasons I have just set out. This difficulty is exacerbated by the fact, as Prof Pinsler very perceptively puts it ([68] *supra*) at p 554, that:

> A balance needs to be struck between too simple an account which omits significant details which the expert needs to consider, and a profusion of facts which will cloud the more important points.

74 Perhaps one *via media*, as it were, would be for the expert concerned to *synthesise*, as best he or she can, the factual matrix that can be gleaned from a holistic consideration of the various AEICs as well as the pleadings. Indeed, one might even suggest a minimalist approach inasmuch as the expert would only sift out facts that clearly constituted common ground amongst the various witnesses.

75 However, the approach just proposed is easier said than done. And this is due to practical reasons. For one, the AEICs would emanate from witnesses on either side of the litigation divide. The present case illustrates this point with limpid clarity. Each eyewitness, for instance, took (on most occasions) a polar opposite view of the manner in which the accident took place. This is not surprising as this reflects the diametrically opposed views taken by the plaintiff and the first defendant themselves. How, then, is the expert concerned to produce his or her report? And, to repeat an important question, how much caution must the court exercise with regard to the findings of each report? Cross-examination is one method of alleviating the difficulties but it is by no means even close to perfect as I shall indicate below (at [78]).

76 Also, if each expert adhered solely (or even mainly) to a common core of facts that would clearly be agreed upon between or amongst them, would this common core in effect constitute a hollow core, one that is too dilute to constitute a firm foundation upon which each expert could develop a helpful report?

77 The report by the expert for the plaintiff in this particular case (PW4) demonstrates, in a very practical manner, many of the difficulties canvassed above. For example, in this particular report, PW4 merely sets out extracts from the various AEICs, literally cheek by jowl. There is no attempt to analyse the divergent views expressed therein. This is not surprising. However, this is not very helpful either. It might also be apposite to observe that the various differences do not go away simply because one ignores them. As importantly, apart from an extremely brief *rebuttal* of the evidence of two of the defendants' witnesses (*ie*, DW4 and DW5) there is no real linkage as such between the extracts from the AEICs and the findings and discussion by the expert himself in that part of his report immediately following the setting out of the said extracts themselves. This is not surprising because if the AEICs are themselves in conflict with each other, there would not be a sufficiently

"stable" base from which to link the analysis of these AEICs with the findings and discussion by the expert himself. Indeed, the present case merely underscores the difficulties outlined briefly above in a very stark fashion.

78 One method to at least alleviate the various difficulties is to take into account the cross-examination of the various witnesses based on their respective AEICs. However, this would depend on the precise point at which the expert evidence as well as expert reports are adduced. Further, it is by no means clear that the facts would, even after cross-examination, have been "settled" if cross-examination was effected before the expert witness concerned took the witness stand. But that would, then, take us back to "square one". As Prof Pinsler quite correctly points out ([68] *supra*) at p 647, "[m]ore often than not, the facts on which experts base their conclusions are in dispute so that if the cross-examiner can show that the facts on which the expert relies are unreliable, his conclusions will not be acceptable" and that "[f]or this purpose it is necessary to determine who observed the facts" (see also above at [72]). It is of course clear that the *expert* himself or herself can be cross-examined (*cf* also Pinsler, *ibid*). However, we are presently concerned, instead, with the facts with which the expert had prepared his or her report. I also note that it is also open to the court itself to direct, at any stage of the proceedings, a discussion between experts (see O 40A r 5 of the Rules of Court (Cap 322, R 5, 2004 Rev Ed)), although, *inter alia*, agreement on specific issues is not necessarily binding on the parties unless they expressly agree to be so bound.

79 The various difficulties briefly set out in the preceding paragraphs suggest that the focus ought, where applicable and practical, to be on *more objective* (in particular, *scientific*) criteria. There were aspects of this in the present case itself – for instance, the taking of photographs and video-recordings. However, there are clearly more elaborate methods of accident reconstruction that are particularly suitable in the context of more complex situations than the present and where much higher monetary stakes are involved (including the use of computer-aided accident reconstruction: see, for example, Barry Sullivan, "Computer-Generated Re-Enactments as Evidence in Accident Cases" (1988) 3 High Technology Law Journal 193 and James T Clancy Jr, "Computer Generated Accident Reenactments: The Case for Their Admissibility and Use" (1996) 15 The Review of Litigation 203). This is especially so in the US, where accident reconstruction has even been the focus of at least one novel by a best-selling author (see also the two articles just cited). However, one must of course be careful not to allow such techniques to overwhelm the very valuable (and, I might add, paradoxically inexpensive) resources of plain intellect, logic and common sense. Still more must the spectacular be eschewed if it is full of sound and fury, signifying nothing. Indeed, it is clearly established law that the evidence of an expert is by no means invariably binding on the court (see, for example, *Sarkar's Law of Evidence*, vol 1([68] *supra*) at pp 862–864 and *Sir John Woodroffe & Syed Amir Ali's Law of Evidence*, vol 2 ([68] *supra*) at pp 2324, 2349–2350 and 2363).

80 Nevertheless, parties ought to be open to new and better techniques of reconstruction where the circumstances and resources warrant it. The benefits of accident reconstruction, as it is complemented by a realistic application to the concrete factual matrix itself, are usefully illustrated by a lucid and accessible article already referred to earlier: see Bates & Bates ([63] *supra*). In this article, the learned authors pertinently conclude thus (at 443):

> Accident reconstruction is a valuable tool that can assist attorneys in determining the facts of a case and in presenting those facts in a logical manner.
>
> Attorneys must be expert in the law and its application, but they cannot be expected to have in-depth knowledge of the complicated sciences used to reconstruct an accident. A well-trained accident reconstructionist can provide the scientific input – the determination of the physical factors that clearly define the collision, the cause of injuries to human beings, and all the physical

factors involved that possibly led to the accident.

The accident reconstructionist can analyze the pre-accident factors of speed, direction and characteristics of the vehicle, attitude and ability of the driver, condition of the roadway and other environmental factors that are pertinent to the case. Post-accident factors are the location and significance of the final resting place of the vehicles and their parts and passengers, skid marks or other evidence of maneuvering at the time of the accident, and the degree of damage or injury inflicted.

A qualified traffic accident reconstructionist and an attorney can make a winning team.

81 The literature with respect to accident reconstruction is in fact a burgeoning one and repays careful reading. As already alluded to above, despite the actual and potential technicality inherent in specific inquiries and studies, there is a not insignificant amount of literature that not only emanates from a legal perspective but is also remarkably accessible (see, for example, Bates & Bates ([63] *supra*); Patrick J Robins, *Eyewitness Reliability in Motor Vehicle Accident Reconstruction and Litigation* (Lawyers & Judges Publishing Company, Inc, 2001) (albeit from a US perspective); and Ian Freckelton, "What makes an expert? Motor vehicle accident causation and reconstruction evidence" (1996) 70(2) The Law Institute Journal 46; and for an accessible non-legal piece, see George A Peters & Barbara J Peters, *Automotive Vehicle Safety* (Taylor & Francis, 2002), ch 11 (entitled "Accident reconstruction")).

82 There are also *other* more general – yet no less intractable – difficulties with regard to expert evidence generally. One has been hinted at, but is in fact an extremely pressing problem and ought therefore to be mentioned. It would surprise no one. It relates to the alleged bias on the part of the expert concerned. It would surprise no one simply because, apart from court-appointed experts, every expert is appointed (and remunerated) by the party who has engaged his or her services. It is true that the expert concerned has, in the final analysis, an overriding duty to objective justice and to the court (see, for example, the oft-cited observations by Lord Wilberforce in the House of Lords decision of *Whitehouse v Jordan* [1981] 1 WLR 246 at 256–257). The principle just mentioned is now embodied, in the local context, in O 40A r 2 of the Rules of Court, as follows:

Expert's duty to the Court (O. 40A, r. 2)

2.—(1) It is *the duty* of an expert *to assist the Court* on the matters within his expertise.

(2) This duty overrides any obligation to the person from whom he has received instructions or by whom he is paid.

[emphasis added]

Reference may be made, in addition, to O 40A r 3(2)(*h*) as well as the views of V K Rajah JC (as he then was) in the Singapore High Court decision of *Vita Health Laboratories Pte Ltd v Pang Seng Meng* [2004] 4 SLR 162 at [79]–[90].

83 All this is only to be expected as "[e]xpert witnesses are in a privileged position; indeed only experts are permitted to give an *opinion* in evidence" [emphasis in original] (*per* Cazalet J in the English decision of *Re J (Child Abuse: Expert Evidence)* [1991] FCR 193 at 226. To this end, the duties of experts have been set out in detail in many cases. Perhaps one of the most detailed formulations is that by Cresswell J in the English High Court decision of *The Ikarian Reefer* [1993] 2 Lloyd's Rep 68 at 81–82, which was endorsed (with one modification) on appeal: see *per* Stuart-Smith LJ, delivering the

judgment of the English Court of Appeal in *The Ikarian Reefer* [1995] 1 Lloyd's Rep 455 at 496. Indeed, Cresswell J's formulation has been described as "[t]he most important enunciation of the duties and responsibilities of expert witnesses" (see Freckelton & Selby, *The Law of Expert Evidence* ([68] *supra*) at p 594).

84 However, one cannot be faulted for taking the views just expressed, with respect to an expert's duty to the court and to justice, with the proverbial pinch of salt, especially when one views this proposition through the lenses of practical reality. Not surprisingly, therefore, this datum difficulty is almost always referred to in the literature and the case law which it cites (see, for example, Jeffrey Pinsler, "Expert's Duty to be Truthful in the Light of the Rules of Court" (2004) 16 SAcLJ 407 and, by the same author, *Evidence, Advocacy and the Litigation Process* ([68] *supra*) at p 650; *Sir John Woodroffe & Syed Amir Ali's Law of Evidence*, vol 2 ([68] *supra*), especially at pp 2354–2355; and Anthony Kenny, "The Expert in Court" (1983) 99 LQR 197 at 214). It has also been pointed out that "the Court may be induced to believe the expert who has succeeded in putting forward his views in the most persuasive and plausible manner" (see H A Hammelmann, "Expert Evidence" (1947) 10 MLR 32 at 34). This poses no real difficulty if the expert concerned has, *in fact*, a persuasive case. However, where he or she does not, the intensity surrounding problems of bias (already undesirable in themselves) is driven home – in spades.

85 The real and effective solution to the difficulties centring on the alleged bias of experts probably lies in the sphere of the extra-legal and this, in itself, reflects, once again, the almost natural intractability that especially characterises the law relating to expert evidence.

86 The second related difficulty also relates more specifically to the expert himself or herself (and see generally *Halsbury's Laws of Singapore* ([66] *supra*) at para 120.259). And that is the issue of the respective *qualifications* of the expert. For example, counsel for the defendants in the present case focused on the fact that PW4 did not have any certificates but was, rather, mentored by what appeared then to be the only accredited accident reconstructionist in Singapore. DW7, on the other hand, is an accredited reconstruction expert (under the US National Highway Traffic Safety Administration) and had approximately two years of working experience. Certificates are of course not imperative (see the oft-cited Singapore Court of Criminal Appeal decision of *Leong Wing Kong v PP* [1994] 2 SLR 54 at 59, [15]). Further, given the relative "simplicity" of the facts involved in the present case, I was unable to ascertain whether or not formal accreditation did in fact make a significant difference. What appears clear, however, is that, as with the situation with respect to the *techniques* of accident reconstruction, there is much room for the development (in tandem) of methods of upgrading *the expertise* of practitioners in this particular field.

87 All the issues canvassed above – and more besides – point to the fact that the area of expert evidence generally is in need of re-examination. Fortunately, none of the issues raised had any impact on the resolution of the present proceedings. This was due, as already mentioned, to the fact that the case was a relatively straightforward one, where the expert evidence proffered was not (unfortunately) particularly helpful (see generally [51]–[54] and [66] above). However, Singapore is not the only jurisdiction where a review might be necessary. Significantly, the New South Wales Law Reform Commission's Issues Paper entitled *Expert witnesses* (IP 25, November 2004) refers (at para 1.2) to the "*world-wide* reassessment and change relating to the management of court business generally and expert witnesses in particular" [emphasis added].

Conclusion

88 As I have already mentioned, I found, on the one hand, the plaintiff to be a reliable witness of truth. His responses were direct and straightforward and at no time did he seek to evade the

questions put to him; neither did he attempt to put a gloss on his responses in order to buttress his case. Indeed, as we have seen and will see, part of his testimony would bear against his case precisely because of his candour (see [12]–[15] above and [90]–[96] below).

89 The first defendant's evidence, on the other hand, did not square at all well with the central argument he was relying upon – which was that the traffic lights were green in his favour but that the dog and the plaintiff had suddenly rushed off the pedestrian kerb and into the path of his vehicle. If so, then it is clear that the plaintiff had, other things being equal, the right of way (see r 7 of the Road Traffic (Pedestrian Crossings) Rules (Cap 276, R 24, 1990 Rev Ed)). It would be equally clear that the first defendant had not kept a proper lookout and/or proceeded at the proper speed as required under the law (see r 5 of the Road Traffic (Pedestrian Crossings) Rules as well as the Singapore Court of Appeal decision of *Ng Weng Cheong v Soh Oh Loo* [1993] 2 SLR 336 at 341–342, [26]–[29]; interestingly, this case was also cited in the defendants' bundle of authorities but was clearly distinguishable in so far as the material facts between that case and this are concerned). Reference may also generally be made, in this regard, to rr 77 to 80 of the Highway Code (Cap 276, R 11, 1990 Rev Ed). In this last-mentioned regard, the following observations by V K Rajah JC (as he then was) in the Singapore High Court decision of *Cheong Ghim Fah v Murugian s/o Rangasamy* [2004] 1 SLR 628 at [58]–[60] are apposite (especially since they deal with the very germane issue of the applicability as well as application of the Highway Code ("HC") to the *Singapore* context):

> The HC in Singapore has been promulgated to apprise all road users of standards that they ought to observe when they use our roads. It does not impose arbitrary or unrealistic standards, to be heeded only when convenient. The HC is an important statement of practice, usage and responsibility that ought to be respected by all road users, save in limited exigencies. Failure to observe the HC can be perilous to other road users.
>
> It must be emphasised that the HC itself states that while it is not a digest of traffic laws, it is a code of conduct and furthermore stresses the *responsibilities of road users to each other*: r 1. As r 3 of the HC pithily sums it up, "Road traffic requires the co-operation of all road users for its smooth and efficient operation". Road users in Singapore, whether they are motorists, motorcyclists, cyclists, pedestrians or joggers, must understand that while they all have natural rights to use our roads, these rights carry responsibilities.
>
> For these reasons, the fact that a road user has ignored or failed to comply with the provisions of the HC should never be lightly dismissed. The consequences of a breach will be dependent, in my view, on a confluence of interplaying factors that ought to include:
>
> (a) the particular provision of the HC breached;
>
> (b) the circumstances in which the breach took place;
>
> (c) whether the breach was conscious or inadvertently took place because of certain exigencies.
>
> [emphasis in original]

90 However, notwithstanding the fact that the balance hitherto lies in favour of the plaintiff, I find that the plaintiff was himself guilty of contributory negligence.

91 The operative provision is, of course, s 3(1) of the Contributory Negligence and Personal Injuries Act (Cap 54, 2002 Rev Ed) which reads as follows:

> Where any person suffers damage as the result partly of his own fault and partly of the fault of any other person or persons, a claim in respect of that damage shall not be defeated by reason of the fault of the person suffering the damage, but the damages recoverable in respect thereof shall be reduced to such extent as the court thinks just and equitable having regard to the claimant's share in the *responsibility* for the damage. [emphasis added]

92 Returning to the present case, even though I believe that the traffic lights were in the plaintiff's favour, the plaintiff ought nevertheless to have checked to see that it was safe to cross the lane immediately in front of him. As we have seen, he checked the *other* two lanes. This would ordinarily have been an adequate indication that the lights were in his (the plaintiff's) favour and that it was safe to cross. However, because of the first defendant's negligence, this was not a wholly sufficient course of action on the part of the plaintiff in the circumstances. And it was certainly not a risk which a reasonably prudent person in the plaintiff's position would have taken, although, in the circumstances, it was clear that the defendant was still substantially responsible for the accident and that the plaintiff was not wholly careless. As Rajah JC succinctly put it in *Cheong Ghim Fah v Murugian s/o Rangasamy* ([89] *supra*) at [83]:

> A person may be guilty of contributory negligence if he ought to have objectively foreseen that his failure to act prudently could result in hurting himself.

93 And, in the English Court of Appeal decision of *Lewis v Denye* [1939] 1 KB 540, du Parcq LJ observed thus (at 554–555):

> In order to establish the defence of contributory negligence, the defendant must prove, first, that the plaintiff failed to take "ordinary care for himself," or, in other words, such care as a reasonable man would take for his own safety, and, secondly, that his failure to take care was a contributory cause of the accident. The doctrine of contributory negligence "cannot be based upon a breach of duty to the negligent defendant."

94 Indeed, it is extremely important to note that the focus is on the *plaintiff and* there is *no* need to demonstrate that the plaintiff had been in breach of a *legal* duty of care as such. In the oft-cited words of Denning LJ (as he then was) in the English Court of Appeal decision of *Davies v Swan Motor Co (Swansea) Ld* [1949] 2 KB 291 at 324–325 (and which are particularly apposite, having regard to the facts of the present proceedings):

> *When a man steps into the road he owes a duty to himself to take care for his own safety*, but he does not owe any duty to a motorist who is going at an excessive speed to avoid being run down. *Nevertheless, if he does not keep a good lookout, he is guilty of contributory negligence*. The real question is not whether the plaintiff was neglecting some legal duty, but whether he was acting as a reasonable man and with reasonable care. [emphasis added]

95 And in *Cheong Ghim Fah v Murugian s/o Rangasamy* ([89] *supra*), Rajah JC observed thus in so far as the actual apportionment of liability is concerned (at [87]):

> Apportionment is more an exercise in discretion than in clinical science; it is one that involves imponderables. Mathematics does not come into the picture given that the court exercises a general discretion, taking into account the causative potency as well as the blameworthiness to be assigned to the different parties involved. Section 3(1) of the Contributory Negligence and Personal Injuries Act (Cap 54, 2002 Rev Ed), by dint of the operative word "responsibility", requires a focus on the responsible causes of an accident.

96 It should, for example, be noted that the material facts in the present case are quite different from that which obtained, for example, in the Singapore High Court decision of *Ang Kuang Hoe v Chia Chor Yew* [2004] 1 SLR 696, where the plaintiff pedestrian in fact crossed the road at an unmarked spot when the pedestrian crossing at the traffic lights was nearby. Not surprisingly, therefore, the apportionment of liability in that particular case would be quite different from that in the present case.

97 In the circumstances, while I find that the first defendant was substantially to blame for the accident, I determine, in the light of all the material circumstances of the case, that liability is to be apportioned in the proportion of 80% to 20% in favour of the plaintiff. The same result obtains with regard to the second defendant.

98 In the result, there will be judgment for the plaintiff on liability in the proportion mentioned above, with costs to be taxed or agreed. Damages are to be assessed by the Registrar.

99 In so far as ancillary matters are concerned, I made no order as to costs with regard to Summons in Chambers Nos 733 of 2005 and 826 of 2005. The costs for Originating Summons No 1329 of 2004 are to be determined by the Registrar after the actual quantum of damages has been assessed.

Judgment for the plaintiff.

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[1] PW3.

[2] See Notes of Evidence ("NE") at p 6, lines 46–47.

[3] See NE at p 7, lines 25–26.

[4] See NE at p 8, lines 17–39.

[5] See NE at p 13, lines 41–45.

[6] See NE at p 14, lines 7–10.

[7] See NE at p 6, lines 4–5.

[8] See NE at p 14, lines 14–15.

[9] See NE at p 36, lines 1–4.

[10] See NE at p 35, lines 14–19.

[11] See NE at p 35, line 46 to p 36, line 4.

[12] See NE at p 33, lines 1–3.

[13] See NE at p 33, lines 5–6.

[14] See NE at p 33, lines 11–16.

[15] See NE at p 20, line 46 to p 21, line 3

[15]See NE at p 20, line 40 to p 21, line 5.

[16]See NE at p 25, lines 5–14.

[17]See NE at p 30, lines 18–20.

[18]See NE at p 30, line 24.

[19]See NE at p 30, lines 44–45.

[20]DW3.

[21]See NE, p 3, lines 5–12.

[22]DW2.

[23]See NE at p 43, line 44.

[24]See NE at p 46, lines 31–34.

[25]See NE at p 48, lines 4–6.

[26]DW6.

[27]See NE at p 51, lines 5–22.

[28]See, in particular, p 3 of the report by the plaintiff's expert and p 3 of the report by the defendants' expert, respectively.