SUPREME COURT OF QUEENSLAND

CITATION:	*Hevilift Limited v Towers* [2018] QCA 89
PARTIES:	**HEVILIFT LIMITED** (appellant) **v** **BRUCE TOWERS** (respondent)
FILE NO/S:	Appeal No 13091 of 2016 SC No 180 of 2009
DIVISION:	Court of Appeal
PROCEEDING:	General Civil Appeal
ORIGINATING COURT:	Supreme Court at Cairns – [2016] QSC 267
DELIVERED ON:	11 May 2018
DELIVERED AT:	Brisbane
HEARING DATE:	19 June 2017
JUDGES:	Fraser and Philippides JJA and Flanagan J
ORDER:	**The appeal should be dismissed with costs.**
CATCHWORDS:	TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DUTY OF CARE – SPECIAL RELATIONSHIPS AND DUTIES – EMPLOYER AND EMPLOYEE – where the respondent was a helicopter pilot employed by the appellant – where the respondent was piloting a helicopter that crashed killing three of its six passengers and seriously injuring the respondent – where the primary judge accepted the respondent's case that the respondent encountered a phenomenon where his helicopter was enveloped by thick cloud that appeared to develop instantaneously – where the primary judge found the appellant liable in damages to the respondent for breaching three of the appellant's duties of care – where the appellant disputed the trial judge's acceptance of a meteorologist's evidence that cloud in that region can form at an out of the ordinary speed even compared to other mountainous regions of the world – whether the primary judge erred in coming to that finding – whether there was evidence that the respondent was aware of this phenomenon – whether the primary judge erred in finding the appellant breached their duties of care TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DUTY OF CARE – SPECIAL RELATIONSHIPS AND DUTIES – EMPLOYER AND EMPLOYEE – where the primary judge found the appellant owed the respondent four relevant duties of care – where the

primary judge held that the appellant had breached these four duties but causation was only established in relation to three of these duties of care – where the appellant alleges to have been denied procedural fairness because the duties of care found by the primary judge were not pleaded by the respondent at trial – where the primary judge had raised at trial the reliance on an "arguably unpleaded breach" – where the respondent did not identify any pleading or statement during trial alluding to the third duty of care found by the primary judge – whether the appellant was denied procedural fairness in relation to the primary judge's finding of the duties of care owed to the respondent

TORTS – MISCELLANEOUS TORTS – INTERFERENCE WITH CONTRACTUAL AND OTHER RELATIONS – CONTRACTS OF EMPLOYMENT – where the pleadings alleged a duty of care owed in negligence and contract – where the contract of employment included a term requiring the respondent to comply with all applicable law – where it was accepted that "all applicable law" included the Civil Aviation Rules – where the appellant alleged the duties of care found by the primary judge were incoherent with the contract and those statutory obligations – whether the duties of care found were incoherent or inconsistent with the contract and the respondent's statutory obligations

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – CONTRIBUTORY NEGLIGENCE – PARTICULAR CASES – OTHER CASES – where the primary judge held that the respondent was not guilty of contributory negligence – where the primary judge found the appellant liable both for breach of the tortious duties of care and for breach of the same duties under an implied contractual term – where the appellant contended that the implied term is inconsistent with the expressly incorporated statutory obligations – where the contract contained an entire agreement clause – whether the primary judge erred in failing to find the respondent guilty of contributory negligence

EMPLOYMENT LAW – CONTRACT OF SERVICE – TERMS OF CONTRACT – IMPLIED TERMS – where the appellant claimed a set-off – where the respondent failed at trial to establish that the respondent had breached the employment contract – where the appellant argued there was an implied term that the respondent was required to indemnify his employer for the respondent's failure to exercise reasonable care – where the set-off in oral argument was contended to mean damages in the amount of the appellant's liability to the respondent – whether the appellant was entitled to a set-off

Papua New Guinea Civil Aviation Rules (PNG)

Fox v Percy (2003) 214 CLR 118; [2003] HCA 22, applied

Koehler v Cerebos (Australia) Ltd (2005) 222 CLR 44; [2005] HCA 15, cited
Kuhl v Zurich Financial Services Australia Ltd (2011) 243 CLR 361; [2011] HCA 11, applied

COUNSEL: G F Crow QC, with J C Trevino, for the appellant
B W Walker SC, with G R Mullins, for the respondent

SOLICITORS: Miller Harris Lawyers for the appellant
Slater and Gordon for the respondent

[1] **FRASER JA:** The appellant provided air transport for workers in a mining project in the Southern Highlands province of Papua New Guinea. The respondent was employed by the appellant as a helicopter pilot. His role included ferrying workers between various workplaces and camps. On 20 April 2006 the respondent was flying a helicopter that crashed on its approach to one of the camps, Camp 57, killing three of its six passengers and seriously injuring the respondent. After a trial on liability issues the trial judge held that the appellant was liable to the respondent for damages to be assessed, without the set-off for which the appellant had contended. The appellant has appealed from that decision.

Background

[2] Some of the appellant's helicopters were equipped with the instruments necessary to enable flight pursuant to instrument flight rules ("IFR") under Papua New Guinea's Civil Aviation Rules. The appellant was flying a helicopter that was not so equipped. It was certified only for visual flight rules ("VFR"). The effect of Rule 91.301 of the Civil Aviation Rules in this case was that the pilot-in-command was obliged not to operate the aircraft at "a distance from clouds that is less than that prescribed"; the relevant prescription was "clear of cloud and in sight of the surface."[1] The pilot-in-command was also obliged not to take off, land, or fly "in the vicinity of an aerodrome, under VFR when the flight visibility, or the cloud ceiling is less than" that prescribed; this prescription was a ceiling of 600 feet and visibility of five kilometres.[2]

[3] An aviation co-ordinator employed by Oil Search Ltd, Moyle, worked at a makeshift control tower at Camp 810. It was part of his role to designate the jobs the respondent was required to perform. On the morning of 20 April 2006 the respondent was required to transport workers from Camp 57 to various work sites. Camp 57 was about 4,500 to 4,850 feet above sea level. Camp 810 was on the same ridge. There was a chain of work sites lower down, named Alpha, Bravo, etc. down to Foxtrot at about 2,500 feet above sea level. At about 4.30 pm, Moyle despatched the respondent to ferry workers from the Foxtrot helicopter pad back up to Camp 57. That flight usually took between five and seven minutes. The trial judge accepted the respondent's evidence that during the first two transfers the weather conditions at Camp 57 were clear, but during the second run there was "a little bit of wispiness" two or three kilometres away.[3] The trial judge rejected the appellant's contention, which was based upon evidence by Oil Search's general manager for

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1 Rule 91.301(a)(2), Table 4.
2 Rule 91.301(b)(2), Table 6 (which applies in "uncontrolled airspace", such as at Camp 57).
3 Reasons [25].

exploration, Schofield, that upon the approach to the helipad at Camp 57 during the second trip the respondent flew through thick cloud and lost all visual senses for one to two seconds before landing without incident.[4]

[4] Moyle gave the following evidence about radio transmissions occurring in the lead up to the respondent's third flight to Camp 57: Moyle received a radio call from Camp 57 informing him that the helipad was "closed due to fog"; Moyle radioed the respondent's helicopter to advise him not to go around Camp 57; and Moyle said that Camp 57 had been reported as being "fogged in", the respondent should come back around to Camp 810, and Moyle could then run the workers around in a vehicle. The respondent replied that he would have a look and get back to Moyle and get some fuel. The trial judge accepted that that Moyle did radio the respondent's helicopter but rejected some of Moyle's evidence about what he said during the call.[5] In particular the respondent was not told that Camp 57 helipad was closed. The trial judge found that the radio transmission occurred in the terms outlined in a statement Moyle signed a few days after the crash. Moyle stated that he told the respondent that "Les from 5-7 called me to say he had fog now, and that it is clear at 8-10 and if need be I will ferry them to 5-7 in a vehicle."[6] The respondent replied, "no worries I will have a look, and on my next run I will get some fuel from you." (This occurred at 4.58 pm.) The trial judge considered that the fact that Moyle did not respond suggested that he did not disagree with the respondent's perception that it was safe for the respondent to go and look at Camp 57. According to Moyle's statement, one minute after that reply Moyle was asked by someone in the area whether he had a helicopter down and a minute later Schofield told Moyle they had heard a loud noise.

[5] The respondent gave evidence that, "[i]f somebody says there's cloud there, you might be able to go out there and on the day it's as clear as a bell but 10 minutes later…it's fogged-in…you've got to…work, you've got to be out there and if you can't get in, you turn around and go back out." The trial judge found that evidence given by the respondent that he did not hear Moyle's transmission and if he had heard the transmission he would have gone straight to Camp 810 was unreliable.[7] The latter part of the evidence was at odds with the respondent's evidence that it would have been standard procedure for him to respond to the message described in Moyle's statement by saying that he would "have a look". The respondent flew to Camp 57 knowing that there was fog there and intending to see for himself whether there was a clear flight path into the helipad or whether such fog as was there precluded such a path; upon expert evidence given by one of the appellant's witnesses, Connolly, that course was uncontroversial. Moyle himself gave evidence that after advising that there was fog it was a matter for the pilot's discretion how to proceed; he agreed that the weather could change so fast that it could be fogged in at Camp 57 when the respondent was flying past him at Camp 810 and yet be clear by the time the respondent arrived at Camp 57.

[6] When the helicopter crashed at Camp 57 it was in thick fog that prevented the respondent from seeing the ground. (Fog is a form of cloud.) A critical factual issue at the trial was whether, as the appellant alleged, the respondent deliberately flew into that fog or whether, as the respondent alleged, the fog suddenly and

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4 Reasons [154]-[161].
5 Reasons [163]-[174].
6 Reasons [166]-[167].
7 Reasons [176].

unexpectedly enveloped the helicopter. The trial judge resolved that issue in the respondent's favour.

[7] The trial judge observed that it is "a matter of ordinary human knowledge and experience that the incidence and speed of cloud formation is generally higher in mountainous than flat terrain."[8] The trial judge found, however, that in the late afternoon in the Southern Highlands of Papua New Guinea where the crash occurred, cloud could form in clear air at a speed which is out of the ordinary compared to almost anywhere else in the world.[9] The respondent had inadvertently encountered this meteorological phenomenon:

> "…As Mr Towers approached Camp 57, there were areas of both clear air and cloud in the vicinity. Such cloud as there was appeared slow moving. Mr Towers adjusted his short path of final approach to comfortably avoid cloud in the vicinity so that he had, what in his ordinary experience he reasonably assessed would be, a sufficiently wide and safe path of clear flight in to the helipad. However, the phenomenon at that time and place of cloud forming at an out of the ordinary speed within the clear air in that flight path then manifested itself. As he proceeded, ever lower, along the apparently clear and sufficiently wide flight path, cloud formed extremely rapidly within it, enveloping the helicopter suddenly. The helicopter was not flown into a visible, pre-existing cloud. Rather, cloud formed with out of the ordinary speed in the air through which the helicopter was flying, surrounding the helicopter, as if instantaneously."[10]

[8] After the helicopter was enveloped by the fog, the respondent attempted to fly by visual reference to the treetops for guidance, keeping the helicopter under control and level, and attempting to go as slowly as possible. Within about 30 seconds the helicopter struck a tree and crashed.

[9] The trial judge held that the appellant owed the respondent duties of care:

(a) "to investigate and ascertain the risks posed to its pilots by local weather conditions and patterns and to have safe work systems which managed those risks";[11] and

(b) to warn the respondent of the phenomenon of fast formation of cloud at the time of day and locale in question at an out of the ordinary speed and the consequential risk of inadvertent IMC;[12] and

either:

(c) to monitor weather in the region of Camp 57 and prohibit flight in to it by the appellant's pilots and divert them to a safe area when prescribed conditions, such as fog or a prescribed humidity level, were forecast or present in the

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8 Reasons [88].

9 Reasons [74]-[101], particularly at [100].

10 Reasons [193].

11 Reasons [104].

12 Reasons [104]. "IMC" refers to "instrument meteorological conditions", being conditions to which IFR apply. "Inadvertent IMC" comprehends a case in which a pilot inadvertently finds himself or herself within a cloud that precludes visual reference to the terrain.

vicinity in the late afternoon, particularly where the aircraft being operated lacked instruments to assist its pilots to escape inadvertent IMC;[13] or

(d) in the alternative to (c), to equip its helicopters with instruments which would reveal the helicopter's orientation (an attitude indicator, turn and slip indicator, and turn coordinator) and train the respondent in the use of such instruments in an emergency, such as to give the respondent a chance of escaping the otherwise likely fatal consequences of inadvertent IMC.[14]

[10] In relation to the duties in (a) and (b), the trial judge found that there was no evidence that the appellant investigated risks posed to its pilots by local weather conditions or of any systemic approach to managing the meteorological phenomenon.[15] The trial judge analysed the evidence about the appellant's training and equipping of the respondent and found that: the respondent did not know of the meteorological phenomenon; the appellant either knew, or should have known of it; if acting with reasonable care for pilots and passengers the appellant should have warned the respondent about it; and the appellant breached its duty of care in not so warning him.[16] The trial judge found that if the respondent had been warned of the risk, upon learning from Moyle's transmission of the presence of fog in the area, he would have concluded that there was an unacceptably high risk of the remaining clear air space clouding in so quickly as to preclude safe flight in the area. He would not have elected to continue towards Camp 57 to "have a look". Instead he would have altered course and proceeded to Camp 810.

[11] In relation to the duty in (c), the trial judge found that there was no system of such monitoring, flight prohibition, and diversion. The radio transmission between Moyle and the respondent shortly before the crash demonstrated the ease with which the appellant could have had such a monitoring and flight prohibition and diversion system. If there were such a system it likely would have resulted in a specific instruction at or before the time of Moyle's transmission, prohibiting the respondent from proceeding to Camp 57 and diverting him. The trial judge found that the respondent would likely have complied with such an instruction, with the result that the crash would not have occurred.[17]

[12] In relation to the duty in (d), the trial judge found that, given the appellant's failure to provide a flight prohibition and diversion system, the appellant breached its duty of care by not equipping the helicopter with an attitude indicator, turn and slip indicator and turn coordinator, and training the respondent to use such instruments in an emergency. The trial judge analysed the evidence about the respondent's qualifications and ability in IFR flight and was not persuaded that the respondent would have avoided crashing the helicopter after his helicopter was enveloped in fog, even if the helicopter had been equipped with the instruments and the respondent had been trained in their use.[18]

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13 Reasons [105].

14 Reasons [151]. The trial judge was not prepared to conclude that both (c) and (d) were required by way of additional response to the heightened risk of inadvertent IMC, but considered that at least one of them should have been provided: Reasons [152]-[153].

15 Reasons [104].

16 Reasons [108]-[126].

17 Reasons [106], [194]-[195].

18 Reasons [196]-[206].

[13] Accordingly, the respondent established that the appellant was liable for damages to be assessed for breach of each of the duties in (a), (b) and (c), but not (d). The trial judge summarised the result in the general observation that the failure to warn the respondent of the risk of very rapid cloud formation occurring in the vicinity of Camp 57 in the late afternoon caused the crash and the respondent's injury.[19]

Grounds of appeal

[14] I will first discuss various grounds of appeal which challenge the trial judge's findings of fact about the circumstances in which the helicopter crashed and the cause of the crash.

Ground (i) **The Primary Judge erred in accepting the evidence of meteorologist Russel Morison (who had never been to PNG) as to the speed of formation of cloud in the Southern Highlands of PNG, over the evidence of pilots experienced in flying in PNG brought both in the plaintiff's case (Mr Timothy Joyce) and the first defendant's case (Mr Peter Crook, Mr Kym Moyle, Mr Shane Schofield, Mr Allan Dodds).**

[15] Ground (i) challenges only the trial judge's acceptance of Morison's evidence. The only other challenge to the existence of the phenomenon of extraordinarily fast cloud formation is in ground (l), which relevantly comprehends only a contention that the respondent's evidence of encountering the phenomenon should be rejected.

[16] The trial judge accepted the respondent's evidence that upon the final approach to the helipad at Camp 57 he encountered that phenomenon: his helicopter was enveloped by thick cloud that appeared to him to develop instantaneously.[20] The respondent had never before encountered that phenomenon. The trial judge also accepted evidence given by other witnesses which supported the respondent's evidence of the phenomenon. The trial judge analysed the evidence as follows:

(a) Morison, a meteorologist, opined that: "[i]n the steep topography of the Southern Highlands of Papua New Guinea, in the late afternoon when the temperature is dropping, the relative humidity is approaching 100 per cent and air is moving vertically up or down the steep topography, it is very easy for cloud water droplets to suddenly form, and hence have a rapid onset of cloud…".[21] Morison explained that "rapid" meant "tens of seconds", the onset of dense clouds could occur "very quickly", and cloud formation "can almost appear instantaneous". The trial judge referred to Morison's acknowledgement that in a still environment when temperature change is slow it ordinarily takes minutes for dense cloud to form as temperature cools, but "the point well explained by his evidence is that perturbation by vertical air movement caused in steep topography in the late afternoon as temperature drops in a region of already very high specific humidity may result in the very quick formation of dense cloud";[22] "[t]he fast speed with which cloud may form in this way in the Southern Highlands of Papua New Guinea is out of the ordinary compared to almost anywhere else in the world by reason of the

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19 Reasons [195].
20 Reasons [193].
21 Reasons [80].
22 Reasons [81].

unique influence of the two rainfall convergence zones in this region of steep topography."[23]

(b) Joyce, a pilot and aviation company manager with experience in piloting helicopters in mountainous regions of Papua New Guinea in the 1980s and 1990s gave evidence that this region of Papua New Guinea was prone to very quick cloud formation. "[H]e had been close to being caught out on a number of occasions when 'white out' occurred 'very, very quickly'"; "…often no more than a minute".[24] Joyce said that sometimes, especially in a breeze, cloud would form up a slope "almost immediately": "…you might be flying towards a gap and the gap's closed, and you'll keep going and suddenly it will be open and you'll have…a window to get through. And sometimes you can see it's clear, and by the time you get there it's closed in."[25] Joyce had not experienced such rapid formation of white-out anywhere else. He referred to two or three occasions when he found himself in cloud without having intended to fly into it, an experience known in the aviation industry as "inadvertent IMC". Joyce observed the phenomenon particularly occurred over rainforest jungle areas at altitude.

(c) Moyle had stayed at Camp 57 for some time in 2005 and for a couple of months before the crash. In cross-examination he agreed that he had noticed that the cloud could descend really quite quickly in that area. Camp 57 can be clear when the helicopter pilot is flying down but be fogged in by the time the pilot gets there within 60 seconds.[26]

(d) Schofield lived at Camp 57 for six or seven months and was there at the time of the crash. The trial judge referred to his evidence that on the hill where Camp 57 was located, the weather changes from clear to foggy "very very quickly".[27]

[17] The trial judge referred to the evidence of two other witnesses which suggested that the phenomenon did not exist in the Southern Highlands or at all:

(a) Dodds was a very experienced pilot, trainer and examiner for commercial licences. He had provided some training to the respondent. He had flown in the vicinity of Camp 57 and had never unintentionally entered or been enveloped by cloud. Dodds agreed in cross-examination that he was familiar with inadvertent IMC, but he also gave evidence that "you can't inadvertently go IMC": "I can't understand how you can inadvertently go IMC. You're looking out the window, you can see the cloud, why would you want to fly into it?"[28] He gave that evidence notwithstanding that for six years the appellant's multi-engine crews had undergone training for exiting from inadvertent IMC. The trial judge considered that Dodds' reluctance to see the obvious detracted from his creditability.

(b) A very experienced pilot, Crook, who gave expert evidence, agreed in cross-examination that the concept of inadvertent IMC had been around for longer than 20 years. He agreed that in the relevant area in Papua New Guinea cloud

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23 Reasons [82].
24 Reasons [91].
25 Reasons [91].
26 Reasons [97].
27 Reasons [98]-[99].
28 T5-50, L30-35; Reasons [95].

> can form very rapidly. He volunteered that there were places in Australia where clouds can form just as quickly. When it was suggested to him that the subject area had a particular atmospheric circumstance that gave rise to rapidly forming cloud he volunteered that it was not different to any other part of Papua New Guinea. When the trial judge asked whether the atmospheric circumstances gave rise to rapidly forming cloud, Crook volunteered that he did not think that it formed more rapidly than in other places of Papua New Guinea or Australia. When asked in cross-examination whether he disagreed with the proposition that this area did not particularly have rapid forming cloud and he was saying it was across all of Papua New Guinea, Crook responded that it was across a lot of Papua New Guinea. The trial judge considered Crook was determined not to concede that Papua New Guinea was unique in the speed with which cloud formed. He gave non responsive answers about cloud forming just as quickly in Australia. The trial judge also referred to Crook's concession that new pilots to Papua New Guinea should be told that cloud can form rapidly there.[29]

[18] The trial judge concluded that some of the evidence supported, and none occasioned doubt about, Morison's expert evidence to the effect that "the speed with which cloud may form in the late afternoon, in the region in which Mr Towers flew, is out of the ordinary compared to what pilots would ordinarily experience flying in the mountainous terrain of other countries in the world."[30] This phenomenon foreseeably heightened the risk of inadvertent IMC.

[19] The main theses of the appellant's argument about the phenomenon are reflected in four general propositions. Three of those propositions are: (1) the finding that the relevant locale was unusually dangerous because it was susceptible to the rapid formation of cloud was contrary to the uniform and compelling evidence of every witness called in the case; (2) the existence of the phenomenon is inconsistent with the evidence given by the most experienced pilot called to give evidence, Crook, that flying in Papua New Guinea was not necessarily different to other parts of the world; and (3) Crook's evidence was unchallenged, uncontroversial, and compelling evidence.

[20] That the first and third propositions are incorrect is sufficiently demonstrated by so much of the trial judge's analysis as is summarised in [16] and [17](b) of these reasons. As to the second proposition, the trial judge did not accept so much of Crook's evidence as conflicted with the evidence of the phenomenon given by the respondent, Morison, Joyce and Moyle. The respondent and Joyce were also very experienced pilots.

[21] Joyce's evidence in particular supported the existence of the phenomenon which the respondent said he encountered. Joyce had previously both flown helicopters in the region and trained newly employed pilots when he worked for the appellant. He gave evidence that he piloted helicopters in mountainous regions of Papua New Guinea in the 1980s, between 1990 and 1992 he worked for the appellant, between about 1994 and about 1997 he was chief pilot for the appellant[31] in its Australian

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29 Reasons [96].

30 Reasons [100].

31 Joyce described his employer as Hevilift (PNG) Pty Ltd. The trial judge found, with reference to evidence given by Dodds that in the two periods in the 1990s despite changes in the company name there had been continuity from Hevilift (PNG) Pty Ltd through to it operating as the appellant: Reasons [128].

operations, and in the latter period he did further flying in Papua New Guinea, including in the Southern Highlands. As already mentioned, Joyce gave evidence that he had not experienced such rapidity of formation of white-out anywhere else and there were two or three occasions when he found himself inadvertently in cloud without having intended to fly in it. Tellingly, he also gave the following evidence:

(a) He had inadvertent entry into IMC, possibly on more than two or three occasions, but two or three occasions were very concerning. Two occurred during the period from about 1984 to 1987 and the third occasion was probably when he was employed by the appellant.

(b) He felt that he was handling the challenge better by the second era when he flew in Papua New Guinea. "I came to realise that if you see the cloud starting to form in the top of the trees, you know the dew point and the temperature were almost matched, and the situation was right for the whole area to become basically a white out or turned to fog which, of course, is low cloud."[32]

(c) Joyce referred to not having experienced almost instantaneous white-out outside Papua New Guinea and said that in the course of training the appellant's pilots employed in Papua New Guinea, he instructed them that cloud "can close in very, very quickly".[33]

[22] Moyle's answer in cross-examination mentioned in [16](c) of these reasons also supports the trial judge's finding, particularly when it is it contrasted with evidence given by Morison that cloud formation in mountainous terrain generally occupies a number of minutes.

[23] The fourth general proposition advanced by the appellant is that upon a proper reading of Morison's evidence it does not support the existence of the phenomenon described by the respondent. Consistently with the terms of ground (i), this was a focus of the appellant's argument upon the issue concerning the existence of the phenomenon. Morison gave only expert evidence of a theoretical basis for the existence and uniqueness of the phenomenon in the Southern Highlands. Rejection of that evidence would not necessarily imply that the phenomenon did not exist or was not unique to the region. It is not necessary to explore that topic further, because I do not accept that the trial judge erred by accepting Morison's evidence as support for the existence of the phenomenon.

[24] The appellant argued that it is impossible to decide what is an "out of the ordinary" speed of cloud formation in a particular mountainous area, given that it is well known that clouds often form more quickly in mountainous terrain than in other areas. But the trial judge used the expression "out of the ordinary speed" to convey that in certain conditions cloud may form in the Southern Highlands of Papua New Guinea very much more quickly than it may occur in mountainous terrain almost anywhere elsewhere in the world. That clearly was supported by evidence. Morison opined that the much greater speed of cloud formation in the Southern Highlands of Papua New Guinea in certain conditions is attributable to a combination of matters which include the unique influence of two rainfall convergence zones. That opinion is consistent with the evidence of Joyce, a pilot with very extensive experience and knowledge of the conditions in the Southern

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32 Reasons [93].

33 T3-37 - T3-40; Reasons [91].

Highlands and elsewhere, that he had experienced the phenomenon only in the Southern Highlands and did not believe it occurred anywhere else in the world.

[25] The appellant submitted that Morison's evidence was instead to the effect that the phenomenon occurred in the whole of Papua New Guinea but that the import of the trial judge's reasons was that the phenomenon was unique to Camp 57. That submission does not accurately reflect Morison's evidence or the trial judge's reasons. The evidence of Moyle and Schofield summarised by the trial judge was specifically concerned with Camp 57 but the trial judge found that the phenomenon occurred in the Southern Highlands of Papua New Guinea and observed that the area within those highlands that was relevant in the present case was the region where Camp 57 was located.[34] Morison did refer to Papua New Guinea being unique, but that was referable to its location in a zone into which moisture flows from two rainfall convergence zones, producing extraordinarily wet conditions in the Southern Highlands.[35]

[26] The appellant pointed out that Morison referred to "steep topography going up to 4000 metres" whereas the crash site was at about 1,372 metres. But Morison did not suggest that the phenomenon could not occur at such an altitude. Morison was not given the exact location of the site of the crash. His report refers both to topographical information showing very steep gradients and peaks and ridges in the region of about 2,000 to 3,000 metres above sea level, and to temperature, rainfall and humidity data from three airports in the region at elevations of 966 metres, 835 metres, and 1,673 metres. Morison expressed his conclusion in general terms: the phenomenon occurred in "the steep topography of the southern highlands of Papua New Guinea."[36] The evidence to which the Court was referred demonstrated that there was very steep topography adjacent to the flat area of Camp 57.

[27] The appellant argued that Morison's evidence that cloud sometimes might appear to form instantaneously concerned only cloud of a kind that differed from the cloud the respondent encountered at Camp 57. Morison referred to three kinds of cloud: "helicopter perturbation cloud" (cloud generated in certain conditions by the rotation of helicopter rotor blades), "orographic cloud" (also called topographic or ridge cloud), and "general mountain cloud". There was no challenge to Morison's theoretical reasoning about helicopter perturbation cloud but the trial judge found that on the whole of the evidence it was more likely that the cloud in which the helicopter was enveloped resulted from natural, rather than man-made, perturbation.[37] It is not necessary to consider that topic further.

[28] The appellant argued that the cloud that enveloped the respondent's helicopter was general mountain cloud rather than orographic cloud. The appellant endorsed the trial judge's summary of Morison's evidence that, although orographic cloud appears as stationary cloud pocketed against a mountain ridge, in fact the cloud is rapidly forming on one edge and rapidly disappearing on the other edge "such that cloud is forming almost instantaneously as the air moves vertically over the particular topography."[38] The effect of this evidence is not that when orographic cloud forms for the first time it may appear to do so almost instantaneously. Rather, the evidence concerns only the process by which apparently stationary cloud

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34 Reasons [89].
35 T 3-78.
36 Mr Morison's Report dated 22 December 2014 at [24].
37 Reasons [87].
38 Reasons [79].

adjacent to a mountain or ridge is continuously regenerated. The appellant argued that the trial judge wrongly treated Morison's evidence of the almost instantaneous regeneration of orographic cloud as evidence that the different kind of cloud encountered by the respondent might have appeared to form almost instantaneously. In the appellant's submission, Morison's evidence placed general mountain cloud in a different category, in which the process of cloud formation occupied a number of minutes.

[29] Morison did accept that in mountainous terrain cloud generally takes a number of minutes to form. The appellant's argument otherwise does not accord with Morison's evidence. The conclusions in Morison's report include that "[i]n the steep topography of the southern highlands of Papua New Guinea, in the late afternoon when the temperature is dropping, the relative humidity is approaching 100% and air is moving vertically up or down the steep topography, it is very easy for cloud water droplets to suddenly form, and hence have a rapid onset of cloud/fog (same thing) formation …"[39] and "[s]udden cloud formation can occur in this environment by even a relatively small perturbation in the atmospheric environment."[40] During cross-examination Morison was asked to ignore the topic of helicopter perturbation and explain what he meant by "rapid onset of cloud…formation". After referring to the steepness of the topography, the associated temperature gradient, and the water content of the air in the Southern Highlands, Morison answered that cloud could form in "tens of seconds … just in a general environment".[41] Morison then referred to orographic cloud "as an example". In relation to an enquiry about the formation of a large bank of cloud in a valley, Morison made it clear that his opinion was that it would "generally" take place over a number of minutes and that "it entirely depends on the causes". Similarly, when the cross-examiner revisited the topic, Morison agreed that in the late afternoon in the highlands of Papua New Guinea, the formation of cloud close to the canopy or near the ground was "typically" going to take a number of minutes and it would "generally" be more gradual. It was also put to Morison that fog would have been forming for minutes before it was so thick that it could not be seen through by the naked eye. Morison responded that it depended upon the environment; that was to be expected in a still environment because the temperature does not change particularly quickly, but in an environment where there was super-saturated air "the cloud can actually once again form quite quickly"; the suggestion that it would take a number of minutes before fog was thick enough so that it could not be seen through was true "as a general rule" but it entirely depended upon the environment. When it was then put to Morison that if the air was super-saturated, with a relative humidity over one hundred per cent, the cloud could form more quickly Morison answered: "Very quickly. Almost – it can almost appear instantaneous." He agreed that in a still environment he would expect that cloud would take minutes to form into "dense cloud" because the temperature change was slow, but he also observed that airflow could affect that "very significantly".

[30] Consistently with the trial judge's conclusion that in the Southern Highlands cloud can form at an out of the ordinary speed, the overall effect of that evidence is that, although the formation of cloud (including fog) in mountainous terrain usually occupies at least a number of minutes, in certain conditions in the Southern

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39 Mr Morison's Report dated 22 December 2014 at [24].
40 Mr Morison's Report dated 22 December 2014 at [35].
41 T3-79.

Highlands cloud may form within tens of seconds. Morison's evidence of that "out of the ordinary" speed of cloud formation was not confined to orographic cloud or to windy conditions or where there is significant perturbation. At no point did Morison resile from the statement in his report that sudden cloud formation in the Southern Highlands could occur "by even a relatively small perturbation in the atmospheric environment." Morison's evidence also supports the conclusion that if the air is super-saturated cloud may form in the Southern Highlands at such a speed as to make it appear that the cloud formed almost instantaneously, even though in a still environment it usually would take minutes to form into dense cloud.

[31] The appellant referred to the result of a climate forecast system re-analysis performed by Morison that the near surface winds in the region were light. It is evident that Morison took that into account in forming his opinion. There is no obvious inconsistency between light winds and what Morison described as "a relatively small perturbation". The appellant also argued that the respondent could not have encountered the phenomenon because the effect of Morison's modelling of the environment was that the relative humidity was only about ninety-five percent, so that the air was not super-saturated. The trial judge accurately summarised Morison's evidence about the decreasing temperature and increasing relative humidity and referred to his conclusion based upon that exercise that at 5.00 pm (within a minute or so of the crash occurring) the relative humidity was about ninety-five per cent. But the trial judge also accepted Morison's evidence that his modelling was not exact for precise locations and at 5.00 pm the relative humidity at the accident site might have been higher than ninety-five per cent because of the steep topography in the area.

[32] The trial judge's finding that the respondent encountered the phenomenon described by Morison was supported by the evidence given by the respondent. The existence of the phenomenon was supported by that evidence and by other evidence, and it was strongly supported by the evidence of Joyce. In these circumstances, and notwithstanding the apparent strength of the evidence-in-chief to the contrary given by Crook and Dodds, the appellant's arguments do not supply a substantial basis for setting aside the trial judge's finding that at the time and place of the helicopter crash, cloud could form in clear air at a speed which was out of the ordinary compared to almost anywhere else in the world.

Ground (j) **The Primary Judge erred in concluding that the plaintiff was unaware that the cloud could move rapidly, where the plaintiff had himself accepted that he was so aware and in the penultimate flight the Primary Judge accepted the evidence of Mr Schofield that in the helicopter flown by the plaintiff it flew through a cloud which was "incredibly quickly moving" (J.159).**

Ground (k) **The Primary Judge erred in finding that the plaintiff's ordinary experience of cloud in the area at the subject time was that it appeared slow moving in circumstances where the plaintiff accepted Mr Schofield's evidence that on a previous flight piloted by the plaintiff, the cloud was moving incredibly quickly.**

[33] In relation to grounds (j) and (k), the appellant argued that the evidence of the respondent that he encountered the phenomenon was contrary to the accepted evidence of Schofield that on the previous flight into Camp 57 the respondent flew into cloud which was then moving rapidly. The trial judge did not accept that evidence in so far as it was inconsistent with the respondent's evidence. The appellant did not articulate any ground for challenging the persuasive explanation given by the trial judge for not accepting the appellant's arguments based on this evidence. In summary, the trial judge's explanation was as follows. The respondent rejected the suggestion in cross-examination that on the second trip to Camp 57 the respondent had flown into cloud. Schofield did not mention the alleged event in a written statement he gave shortly after the accident. The trip in the helicopter to which Schofield referred might not have occurred in the helicopter piloted by the respondent in the second last flight, because Schofield's recollection was that the flight to which he referred was returning from a ceremony at a different place. Furthermore, on Schofield's evidence he was seated in the back left hand corner of the aircraft and his perception was that during the descent the helicopter went thought cloud "very quickly" for "only a second. A second or two", and he said it was "hard to have sense of time, and it was a very long time ago".[42] It did not follow from Schofield's account, that the incredibly quickly moving cloud caused Schofield's window to white-out for a second or two, that the respondent perceived the same event. If the event did occur, it may have been entirely unnoticed by the respondent from his different perspective at the front of the aircraft or it might have been so inconsequential as not to have registered in his mind as an event causing concern.

[34] Ground (j) cites paragraph 159 of the trial judge's reasons for the proposition that the trial judge accepted Schofield's evidence that the helicopter flown by the plaintiff flew through "incredibly quickly moving cloud". Rather, the trial judge observed that, "on Mr Schofield's account the passage of the incredibly quickly moving cloud caused his side perspex window to white out for a second or so…".

[35] In an affidavit the respondent swore on 23 July 2009, he referred to a recollection that he saw clouds "start to slowly come in over a ridge" as he travelled to Camp 57 on the third flight. The respondent swore that when he saw the cloud start to slowly come in over the ridge he negotiated "around the back of the cloud to avoid it" and then it "went into complete whiteout".[43] The appellant argued that the trial judge found that the respondent's ordinary experience of cloud was that it appeared slow moving on the basis of the affidavit, but that affidavit was not accepted by the trial judge because it was inconsistent with the respondent's oral evidence. This argument confuses the speed of cloud movement with the speed of formation of cloud. Whether or not the cloud "could move rapidly", as ground (j) asserts the respondent accepted, is not the point. The affidavit refers to the movement of clouds slowly over a ridge. The trial judge found that the respondent adjusted his final approach to avoid that cloud, leaving him "a sufficiently wide and safe path of clear flight in to the helipad" and as he proceeded along that flight path "cloud formed extremely rapidly within it, enveloping the helicopter suddenly".[44] The trial judge accepted the respondent's rejection in cross-examination of the suggestion that the cloud that he encountered (the cloud that enveloped the helicopter) was slow moving cloud.

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42 Reasons [156]-[157].

43 Respondent's affidavit sworn 23 July 2009 at [18]-[19]; Reasons [189].

44 Reasons [193].

The trial judge accepted the respondent's explanation that the cloud that resulted in the accident "developed instantaneously" and "atomised and it was thick". What was involved was both a slow moving cloud which the respondent avoided and a "complete whiteout" in a cloud that enveloped the helicopter.

[36] The appellant argued that the respondent's statement in his affidavit that he "negotiated to around the back of the cloud to avoid it" should not have been accepted, both because it was inconsistent with the evidence of Schofield that on the previous flight the helicopter flew directly through fast moving cloud and because when the affidavit was put the to the respondent he asserted that there was no cloud at Camp 57 at the time of the accident. The suggested inconsistency with the evidence of Schofield has already been discussed. The respondent did state in evidence that there was no cloud at Camp 57. He said that he had "clear air at 5/7 on approach, and right up until that time when it went bang and it went very opaque" and that the cloud referred to in his affidavit was another 1,000 metres further to the south-west. The trial judge considered that the respondent was "seeming to speculate" when he suggested that the cloud was one kilometre to one kilometre and a half away and found that the cloud was so close to Camp 57 that the respondent had to alter his path of approach to avoid that cloud impeding a clear final path.[45] The trial judge also accepted that inconsistencies between the respondent's evidence-in-chief, his affidavit, and his explanations in cross-examination detracted from his reliability.

[37] Taking those and other matters into account the trial judge nonetheless accepted the respondent's evidence that on the final approach he was on an apparently clear flight path and did not deliberately fly into cloud.[46] This is an example of a case in which the advantage of the trial judge in seeing and hearing the evidence unfold at trial is particularly significant. I am not persuaded that the trial judge misused that advantage or made any finding that lacked reasonable support in apparently credible and reliable evidence.

Ground (l) **The Primary Judge erred in fact in finding (at [193]) that as the plaintiff proceeded in the helicopter towards the helipad at Camp 57:**

i. cloud formed extremely rapidly within [the helicopter's flight path] enveloping the helicopter suddenly; and

ii. cloud formed with out of the ordinary speed in the air in which the helicopter was flying, surrounding the helicopter, as if instantaneously;

in circumstances where:

iii. the evidence at trial was that cloud formation was not instantaneous, but rather could take minutes to form; and

iv. the helicopter was being flown at approximately 30 to 35 knots, and was able to travel faster that the rate at which cloud could form in its immediate flight path.

[38] In relation to ground (l), subparagraph (iii) is contrary to the accepted evidence. As appears from the discussion of ground (i), evidence supported the trial judge's comparison between the well-known event of formation within a number of minutes

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45 Reasons [190]-[191].

46 Reasons [192].

of cloud in mountainous terrain in many places and the very much faster speed of cloud formation in certain conditions in the Southern Highlands of Papua New Guinea.

[39] In relation to subparagraph (iv) of ground (l), the appellant argued that at the top speed of the helicopter, 120 knots or 62 metres per second, the respondent could always ensure that the helicopter avoided cloud. The appellant did not cite any evidence to support this conclusion. For the similar contention at the trial, the appellant cited a passage of transcript in which it was put to the respondent that a helicopter was always able to outrun cloud or fog.[47] The respondent denied that suggestion. The appellant's argument overlooks the difference between the rate of movement of cloud and the rate of formation of cloud. In relation to evidence given by some of the appellant's witnesses that steering clear of cloud was adequate to avoid inadvertent IMC, the trial judge considered that this was common sense where clouds formed and moved at a speed that could be anticipated, but the accident happened in an area where "there was a risk cloud could form so rapidly as to envelope a helicopter being flown in the vicinity by a pilot doing his or her conscientious best to avoid flying in cloud."[48]

[40] The appellant argued that the trial judge arrived at the finding of "instantaneous envelopment" in ignorance of compelling evidence that Camp 57 was fogged in before the helicopter arrived. For this proposition the appellant cited three pieces of evidence. First, the appellant referred to the radio transmission by Moyle that Camp 57 had "fog now". The appellant did not challenge the trial judge's decision that the radio transmission was in the terms outlined in Moyle's contemporaneous statement.[49] In that statement Moyle did not suggest that he communicated to the respondent that Camp 57 was "fogged in". His communication conveyed only that there was "fog now" at Camp 57. The evidence of the respondent, Connolly and Moyle summarised in [5] of these Reasons strongly supported the conclusion that there was nothing inappropriate about the respondent's decision to fly to Camp 57 intending to see for himself whether or not such fog as was there precluded a clear flight path into the helipad. The appellant referred also to the evidence of Schofield that he observed heavy fog immediately after hearing the helicopter crash. As the trial judge found, the presence of fog at a point in time after the crash is not inconsistent with the respondent's account of cloud enveloping the helicopter without warning.[50] Other evidence given by Schofield tended to support the respondent's account. Schofield testified that he was in his office when he heard the sound of the crash and noticed the fog, but when he had last been aware of the weather, when he arrived on a previous flight, he had noticed when leaving the helicopter that it was "all sunny, just with this passing cloud…it changes very very quickly on that hill as we saw in the…six or seven months we lived there."[51]

[41] The third piece of evidence upon which the appellant relied was a statement by Mano, who was at Camp 57 when the helicopter crashed. He could not be found in order to give evidence. The appellant relied upon his statement that on the day of the accident at "16:50 pm [sic], I was at my small donga getting ready to go to the main camp mess 5/7X. At that time [writing obscured] area at 5/7 X was totally

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47 Defendant's submissions at [2.7]; T3-8, T4-75.
48 Reasons [101].
49 See [4] of these Reasons.
50 Reasons [182].
51 T5-87 and T5-88. Reasons [183].

covered with heavy fog…I got into my uniform and about 2/5 minutes. [sic] I heard the Hevilift chopper heading towards the left end side of the mountain at 5/7X. Approximately 1700 hours I heard the loud crash on the mountain…".[52] As a result of Mano not giving evidence there was no opportunity to test or clarify his statement. The trial judge concluded that it was unclear what area at the camp was totally covered with heavy fog at the time and whether Mano's view included a view of the helipad area and the approach to that area, it was uncertain whether Mano knew that an area was covered with heavy fog at the time Mano was getting ready to go outside or whether he only noticed the fog when he was outside, and it was unclear whether Mano was still in his donga when he heard the crash or whether by then he was outside. The appellant did not submit that those conclusions were wrong or did not justify the trial judge in heavily discounting the weight to be attributed to Mano's statement. It is again evident that the trial judge weighed this evidence in the context of all the evidence upon the relevant issue.

Challenges to finding of fact

[42] These grounds of appeal (and some other grounds discussed below) challenge findings of fact made by the trial judge with reference to oral evidence. The trial judge referred in footnotes to passages of evidence supporting the findings of fact. In each case where the finding is challenged in this appeal, the trial judge's finding accurately reflects and is supported by the evidence. (It will be apparent that the appellant contends to the contrary only in relation to a very small number of the challenged findings.) Each challenged finding of fact was necessarily informed by the trial judge's impression of the witnesses whose evidence the trial judge accepted or rejected. An appellate court must conduct a real review of the trial and the trial judge's reasons, but it must bear in mind the natural limitations existing in any appellate court proceeding. These include the appellate court's relative disadvantage in respect of the evaluation of witnesses' credibility and the "feeling" of a case, which is not always revealed by the transcript, and the circumstance that the trial judge has an advantage, derived from the obligation at trial to receive and consider all of the evidence and the opportunity to reflect upon and draw conclusions from it.[53] In particular cases where a trial judge's conclusions are based on credibility findings, such findings may be demonstrated to be erroneous by reference to incontrovertible facts or uncontested testimony, and in some "quite rare" cases an appellate court might conclude that the trial judge erred because the decision is "glaringly improbable" or "contrary to compelling inferences".[54] It is evident from the careful and detailed reasons given by the trial judge that his Honour considered all of the relevant evidence before deciding these factual issues in favour of the respondent. Those findings are not glaringly improbable or contradicted by any incontrovertible evidence. No other ground has been articulated that might justify the court in setting them aside.

Duty of Care:

Ground (a) **The Primary Judge erred in law in failing to accurately or at all identify the duty of care owed by the first defendant to the plaintiff by failing to take into account the contract of**

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52 ARB 1528 Ex 42; Reasons [180].

53 *Fox v Percy* (2003) 214 CLR 118 at 125-127 [23]-[25] (Gleeson CJ, Gummow and Kirby JJ).

54 *Fox v Percy* (2003) 214 CLR 118 at 128 [29] (Gleeson CJ, Gummow and Kirby JJ).

employment between the plaintiff and first defendant and the *PNG Civil Aviation Rules*.

Ground (e) **The Primary Judge erred in finding the first defendant should have investigated and ascertained risks posed to pilots by local weather conditions and patterns and implemented work systems to safely manage that risk when such an allegation of negligence was not brought by the plaintiff against the first defendant.**

Ground (g) **The Primary Judge erred in concluding the first defendant did not implement a local regime for monitoring weather in the region of Camp 57 in the absence of such a case being brought by the plaintiff against the first defendant and in the face of the evidence of aviation coordinator Mr Kym Moyle.**

Ground (h) **The Primary Judge erred in finding the first defendant ought to have directed the prohibition of the flight and the diversion to a safe landing area, contrary to the requirements of the *PNG Civil Aviation Rules*.**

Procedural fairness: grounds (e) and (g)

[43] The effect of ground (e) is that the appellant was denied procedural fairness in relation to the trial judge's conclusion (see [9](a) and (b) of these reasons) that the duty of care owed by the appellant to the respondent included a duty to investigate and ascertain the risks posed to its pilots by local weather conditions and patterns and to have safe work systems which managed those risks. In relation to ground (g), the appellant contends,[55] so far as concerns the duty issue, that the respondent did not bring a case against the appellant that there was a failure by the appellant to implement proper weather monitoring in the region of Camp 57 (see [9](c) of these reasons).

[44] The statement of claim alleged that: the appellant owed the respondent a duty to take reasonable care to ensure the respondent's safety during the course of his duties as a helicopter pilot and to take reasonable steps to ensure a safe system of work;[56] the appellant knew or ought to have known that the route the respondent travelled to Camp 57 "was a region in which thick cloud might develop very quickly and that a helicopter may be unavoidably enveloped by cloud causing a pilot to lose visibility"; and the respondent's injury was caused by the appellant's negligence and breach of contract. I adopt the trial judge's summary of the substance of the appellant's breaches pleaded by the respondent:

> "(a) failed to provide Mr Towers with a helicopter equipped for flight by reference to instruments, namely an attitude indicator, turn and slip indicator and turn co-ordinator, when flying in a region where there were conditions of the kind prevailing at the time of the ill-fated flight;
>
> (b) failed to advise Mr Towers against flying without such equipment in such circumstances;

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55 Appellant's Amended Outline of Argument at [30].

56 Third Further Amended Statement of Claim at [1.14].

(c) failed to ensure Mr Towers was not dispatched to fly without such equipment in such circumstances;

(d) failed to provide a safe system of work;

(e) failed to adequately investigate risk."[57]

[45] The trial judge referred to examples of occasions during the trial where the respondent relied upon "an arguably unpleaded breach" of a failure to warn the respondent of the phenomenon that in the late afternoon in the mountainous region where the respondent was working cloud could form and move very quickly. The trial judge held that this alleged failure was sufficiently pleaded as a foundation for liability, because it was an implicit part of the pleaded case: the conditions to be warned of were the circumstances referred to in (a), (b) and (c); such a warning was an implicit part of the advice referred to in (b); "knowledge of the need for it would flow from the adequate investigation alluded to in breach (e)"; and a warning of it would form part of a system mentioned in (d).[58] The appellant did not attempt to identify any error in that analysis.

[46] The duty found by the trial judge which is the subject of ground (e), to investigate and ascertain risks posed to pilots by local weather conditions and patterns and implement work systems to safely manage that risk, is implicit in those alleged breaches. Furthermore, the issues raised by that ground clearly were litigated:

(a) In opening the respondent's case at trial, senior counsel foreshadowed the respondent's evidence that "all of a sudden he became enveloped in cloud [and] … he had never there experienced anything like it."[59] Junior counsel for the respondent foreshadowed in his opening that Joyce would give evidence that the cloud would come in "extremely quickly" and could occur in ten or 15 seconds, Joyce himself had been caught in cloud, when he was chief pilot of Hevilift operations in Australia, he appreciated the risks that pilots in Papua New Guinea may find themselves inadvertently in IMC, and he briefed trainee pilots about the consequential risks. Junior counsel also foreshadowed evidence by the respondent that he did not know that in Papua New Guinea a white-out might occur in a very short time, he had received no training or instruction from the appellant in that respect, and if he had known of the risk he would not have proceeded to Camp 57.

(b) On the third day of the trial (which occupied seven days), senior counsel for the respondent described the respondent's case in terms that comprehended allegations that the appellant should have warned the respondent that in the region in which the appellant operated the helicopter might become enveloped by cloud, with a risk of inadvertent IMC, and the appellant should have advised the respondent not to fly the helicopter in those circumstances. The appellant did not then object to that case being litigated.

(c) On the fourth day of the trial, senior counsel for the respondent acknowledged that the respondent knew that he should keep clear of cloud but submitted that there was no warning of the event that happened; if the appellant had warned him, he would not have flown the helicopter. Junior counsel for the appellant

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57 Reasons [38]. References removed.
58 Reasons [39].
59 T1-10

did not the object to that case being litigated but thereafter opened part of the appellant's case.

(d) The respondent argued in its written submissions at the end of the trial that the appellant owed and breached duties to investigate the risk of inadvertent IMC arising from the rapid development of cloud in Papua New Guinea at certain times of the day and in certain atmospheric conditions, a phenomenon which differed from what the employee pilots might have experienced, and, secondly, to instruct pilots of the phenomenon and ensure that pilots were not placed in situations where they might be enveloped by rapidly descending cloud.

(e) In oral submissions after written outlines had been exchanged, the appellant met each aspect of the respondent's case on its merits. (Senior counsel did submit that it was never part of the respondent's case that the particular area of Camp 57 was a "Bermuda Triangle", but that is not the effect of the trial judge's findings: see [25] of these reasons.) The appellant's senior counsel made extensive oral submissions, primarily in support of contentions that the court should reject the evidence of the respondent, find that the respondent had deliberately flown into cloud, and conclude upon the whole of the evidence that there was no phenomenon in which a helicopter could be enveloped by cloud within seconds without leaving an opportunity for the pilot to fly away from the cloud.

[47] The appellant did not argue that it insisted at the trial upon a stricter construction of the pleadings, that it did not participate in the litigation of the issues which are now the subject of complaint in ground (e), or that it might have adduced any other evidence if the statement of claim had more clearly expressed the duty of care in [9](a) and (b) of these reasons. Ground (e) should be rejected.

[48] As to ground (g), the respondent did not identify any pleading or statement during the trial which made it clear that the respondent alleged a duty of care in the particular terms described in this ground. The terms of the relevant duty (see [9](c) of these reasons) do not seem to have been articulated before they appeared in the trial judge's reasons. I would therefore accept the appellant's argument that the respondent did not bring a case that it failed to implement proper weather monitoring in the region of Camp 57. The respondent did not apply for leave to amend his statement of claim to add allegations that the duty in [9](c) of these reasons was owed and breached by the appellant. In these circumstances, the judgment for the respondent is not justifiable with reference to a breach of that alleged duty.

[49] This result does not falsify the judgment, because no error has been identified in the trial judge's findings summarised in [10] of these reasons. Those findings establish that the breach of the duty in [9](a) and (b) of these reasons was an independent cause of the crash and the respondent's consequential injuries.

The existence and content of the duty of care: grounds (a) and (h)

[50] The trial judge made the following findings and observations which are of particular relevance to grounds (a) and (h). The Civil Aviation Rules place significant responsibility for the safety of a flight upon the pilot-in-command, including by the provision in Rule 91.217 that before beginning a flight the pilot-in-command is to

obtain and become familiar with an array of information concerning the pending flight, including current meteorological information, where practicable, and the alternatives available if the planned flight cannot be completed. The trial judge referred also to Rule 91.301: see [2] of these reasons.

[51] Paragraph 34 of the trial judge's reasons recites the duty of care alleged in the respondent's third further amended statement of claim, that the appellant owed the respondent a duty "to take reasonable care to ensure his safety during the course of his duties as a helicopter pilot and to take reasonable steps to ensure a safe system of work." Paragraph 35 of the reasons states that the duty of care "is allegedly owed in negligence … and in contract" and that the existence of "such a duty is not in dispute".[60] In subsequent sections of the reasons the trial judge referred to the respondent's aviation qualifications and experience, concluded that they were accurately represented in the résumé he provided to the appellant, and discussed the phenomenon at the time and place of the crash of cloud forming at an out of the ordinary speed.

[52] The trial judge thereafter referred to the appellant's argument at trial (which relied in particular upon *Koehler v Cerebos (Australia) Ltd*)[61] that the appellant could not be in breach of their duty of care by insisting that the respondent comply with his contractual obligations, including his obligation to comply with the Civil Aviation Rules. The trial judge concluded that those matters were not inconsistent with the appellant owing additional obligations, given its duty of care to its employee pilots, and did not result in a problem of coherence as between the law's requirements.[62] That was so "because the departure from VFR here occasioned was the unintended result of the foreseeable manifestation of a regional phenomenon and associated risk which [the appellant], in choosing to operate its flight business in that region, ought to have known of and taken steps to warn and safeguard its pilots against."[63] The trial judge cited observations by Edmund Davies LJ in *Bux v Slough Metals Ltd*,[64] for the proposition that merely requiring compliance with statutory requirements does not per se absolve the employer from liability to its employee at common law, and concluded that the appellant was obliged to do more than merely provide helicopters equipped for VFR and expect compliance by its pilots with the Civil Aviation Rules.

[53] The trial judge also found that the appellant was likely aware of the phenomenon that cloud could form at out of the ordinary speed in the region of Camp 57 in the late afternoon, giving rise to a heightened risk of inadvertent IMC. That inference was supported by the fact that the appellant operated helicopters in the region and, in a report about the accident to the Civil Aviation Authority of Papua New Guinea, the appellant referred to a cause or element of the crash as being "the rapid and changeable weather patterns in this area". The appellant's chief executive who signed the report was present in court but was not called to give evidence to counter the apparently reasonable inference that the appellant was or should have been aware of that heightened risk.[65] (It may be added that the evidence of Joyce mentioned in [21] of these reasons is additional support for that conclusion;

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60 Reasons [34] and [35].
61 (2005) 222 CLR 44, 46.
62 The trial judge cited *Sullivan v Moody* (2001) 207 CLR 562, 581.
63 Reasons [102].
64 [1973] 1 WLR 1358 at 1364.
65 Reasons [103].

information about the phenomenon and the consequential risk could easily have been obtained by the appellant from the chief pilot.)

[54] The appellant argued that, contrary to the trial judge's conclusion, the appellant's pleading denied that it owed the respondent any of the duties of care he alleged in his statement of claim. The trial judge adopted the inappropriate methodology of looking first to the cause of the damage and what could have been done to prevent it and, from there, determining the relevant duty of care and its scope and content, or by beginning the enquiry about duty by focussing only upon questions of duty. The relevant consequence of this suggested error was submitted to be that the duties of care formulated by the trial judge omitted to take into account the "salient features" of the relationship between the plaintiff and defendant. The trial judge did not fully explore the contractual position and the relevant statutory framework, but assumed that the duty of care was sufficiently stated in general terms without reference to what limits might exist upon the kind of obligations that could be required of an employer. This error resulted in the duties of care omitting reference to required limitations. The limitations were submitted to be required by identified provisions of Papua New Guinea's Civil Aviation Rules and their incorporation in the written employment contract. Under that contract, the appellant was entitled to rely upon representations by the respondent that he was an experienced, safe and competent fixed wing and rotary wing pilot, having a total flying time of 5995 hours in fixed wing aircraft and 2805 hours in rotary wing aircraft and he had experience of flying in Papua New Guinea in remote location mining exploration. The overall effect of the contractual and regulatory provisions was submitted to be that the scope and content of the appellant's duty of care went no higher than providing a reliable, safe, VFR helicopter.

[55] The respondent argued that the trial judge appropriately commenced the analysis by identifying the relevant foreseeable risks and thereafter took into account the contractual and regulatory obligations relied upon by the appellant in the course of deciding that the duty of care advocated by the respondent did not involve any incoherence as between the differing requirements of the law. The Civil Aviation Rules do not regulate the relationship between pilot and employer, nothing in them limits an employer helping an employed pilot to discharge his or her statutory obligations. The respondent argued that there was no inconsistency between the particular provisions relied upon by the appellant and the duties of care found by the trial judge and no other consideration suggested any such incoherence as was advocated by the appellant.

[56] The duties of care alleged in broad terms by the respondent were denied in the appellant's amended defence with reference to allegations about the terms of the employment contract, including a term requiring the respondent to comply with the applicable law and a warranty by the respondent employee as to the correctness of his résumé.[66] It is also the case that in the written submissions at trial, the appellant submitted that specified terms of the employment contract and the Civil Aviation Rules left no room for any of the duties of care alleged in the statement of claim.[67] But the appellant modified that argument in its subsequent oral argument before the trial judge. The appellant then submitted, as it submits in this appeal, only that the relevant provisions of the Civil Aviation Rules and their incorporation in the employment contract precluded the imposition of any duty that was incoherent with those rules. The submission implicitly acknowledged that the appellant owed the

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66 Amended Defence at [13] with reference to [7], [8] and [12].

67 Defendant's submissions, [13.16].

respondent a duty of care by virtue of the employment relationship, at least to supply a helicopter meeting certain standards of safety and reliability.[68] The appellant acknowledged in its outline of argument on appeal that the existence of a duty of care in tort was not in dispute at the trial.[69]

[57] The trial judge's reasons should not be understood as including a conclusion that the appellant owed to the respondent a duty of care derived without reference to the salient features upon which the appellant relied. After identifying foreseeable risks of a kind which, upon the trial judge's analysis, are not exclusively managed by the Civil Aviation Rules or the employment contract, the trial judge articulated the more narrowly defined duties of care mentioned in [9] of these reasons. In that context, the remark in paragraph 35 of the trial judge's reasons that the existence "of such a duty" was not disputed did not convey that there was no dispute about the content of the duty of care. The trial judge analysed the Civil Aviation Rules and the employment contract in a way that responded to the appellant's argument at trial that the appellant "could not be in breach of a duty of care merely by insisting that Mr Towers comply with his contractual obligation, and indeed his obligation…to comply with the rules of the Civil Aviation Authority."[70] That analysis did assume that the task was to identify the content of the appellant's duty of care, rather than to determine whether the appellant owed any duty of care, but that ultimately reflected the appellant's case upon the topic.

[58] As the appellant submitted, to look first to the cause of the damage and what could have been done to prevent that damage, and from there to determine the scope and content of any relevant duty, or to begin the enquiry by focussing only upon questions of breach of duty, risks the error that the formulated content of the duty may fail to take into account material aspects of the parties' relationship.[71] The questions of whether there is a duty of care and, if so, what its scope and content are, must be determined by reference to what is reasonably foreseeable and the salient features of the relationship between the plaintiff and defendant.[72] The salient features include relevant obligations the parties owe each other under the employment contract and relevant statutory obligations.[73] The trial judge undertook such an analysis, including by reference to each of the matters the appellant argued were salient features of the parties' relationship.

[59] The High Court observed in *Sullivan v Moody*[74] that "the tort of negligence would subvert many other principles of law, and statutory provisions, which strike a balance of rights and obligations, duties and freedoms" if foreseeability alone were sufficient to establish a duty of care.[75] It is necessary to preserve the coherence of the law, and "if a suggested duty of care would give rise to inconsistent obligations, that would ordinarily be a reason for denying that the duty exists."[76] In *Govier v*

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68 Defendant submissions [12.10]-[12.13].

69 Appellant's Amended Outline of Argument at [36].

70 Reasons [102].

71 *Kuhl v Zurich Financial Services Australia Ltd* (2011) 243 CLR 361 at 370 (French CJ and Gummow J), referring to *Koehler v Cerebos (Australia) Ltd* (2005) 222 CLR 44 at 53 [19] (McHugh, Gummow, Hayne and Heydon JJ).

72 *Kuhl v Zurich Financial Services Australia Ltd* (2011) 243 CLR 361 at 370-371 (French CJ and Gummow J), citing *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540 at 597-598 [149].

73 *Koehler v Cerebos (Australia) Ltd* (2005) 222 CLR 44 at 53-55 [21]-[26] (McHugh, Gummow, Hayne and Heydon JJ).

74 (2001) 207 CLR 562.

75 (2001) 207 CLR 562 at 576 [42].

76 (2001) 207 CLR 562 at 582 [60].

The Uniting Church in Australia Property Trust,[77] I referred also to *State of New South Wales v Paige*[78] which raised issues of compatibility and coherence between the law of tort and other duties, including the law of contract as modified by statute. Spigelman CJ noted that "conflict or tension between duties" is one of the many factors that must be balanced "to determine whether a duty of care existed."[79] Referring to *Sullivan v Moody*, his Honour remarked that "issues of coherence may arise even if there is no direct inconsistency. It may be enough if the effect of imposing civil liability is to 'distort [the] focus' of the statutory decision-making process."[80] Other examples of the rejection of a duty of care on the ground of incoherence falling short of direct inconsistency between the duty and another legal obligation are mentioned in *Hogno v Racing Queensland Ltd*.[81]

[60] The contract included: an acknowledgement by the respondent that he was required by the appellant to possess and maintain the skills and qualifications required for the proper performance of his duties;[82] a warranty of the truth of the résumé he submitted when he was employed, and statements made in support of his application for employment; a warranty that the appellant relied upon his stated skills and qualifications in employing him, and an acknowledgement that he was required to undertake training and impart knowledge of his skills to other employees of the appellant during the term of his employment,[83] "comply with all lawful directions of the Company issued from time to time",[84] perform and observe the appellant's policies,[85] and "comply with all law applicable to the Employee's position and the duties assigned to the Employee".[86] It is common ground that the contract obliged the respondent to comply with the Civil Aviation Rules.

[61] One of the salient features which the appellant emphasised in argument is the respondent's résumé, the truth of which he warranted in the employment contract. The respondent represented that he was an experienced, safe, and competent fixed and rotary wing pilot. His experience included flying in Papua New Guinea and in remote location mining exploration. The appellant also referred to the respondent's evidence that he had started flying with his father in Papua New Guinea in 1966 or 1967, when the respondent was in Grade 11 and his father's business had various sites across Papua New Guinea which would have required the respondent to fly over the Owen Stanley Ranges. The respondent spent about six years flying in Papua New Guinea. The appellant argued that this suggested that there was "an inversion of the normal employee/employer relationship, in concerning expertise."[87] The argument did not grapple with the trial judge's findings upon this topic. The trial judge found that the respondent did not know of the meteorological

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77 [2017] QCA 12.
78 (2002) 60 NSWLR 371.
79 (2002) 60 NSWLR 371 at [105].
80 (2002) 60 NSWLR 371 at [93] quoting *Crimmins v Stevedoring Industry Finance Committee* (1999) 200 CLR 1 at 101 [292] per Hayne J.
81 [2013] QCA 139.
82 I did not understand it to be contended, and I would not accept, that this warranty was breached by the respondent's unawareness of the phenomenon that was found to occur only in the Southern Highlands.
83 Contract clauses 2.1, 2.6, 2.7, 2.9. The contract imposed duties upon the appellant to "perform to the best of the Employees' abilities and knowledge…the duties assigned to the Employee…[including] those set out in the Operations Manuals"; contract clause 3.1(a).
84 Contract clause 3.1(f).
85 Contract clause 3.1(g).
86 Contract clause 3.1(h).
87 Transcript 19 June 2017 at 1-13.

phenomenon that caused the crash,[88] and, not only that the appellant, if acting with reasonable care for its pilots and passengers, should have known of that phenomenon, but that the appellant was likely aware of it.[89] The appellant itself pleaded that the plaintiff had "some fixed wing experience in Papua New Guinea" but he had "no or no significant prior rotary wing experience in Papua New Guinea,"[90] and the trial judge rejected the appellant's argument that the respondent's résumé implied that he had rotary wing experience, rather than merely fixed wing experience, in Papua New Guinea. The trial judge also found that the respondent's experience flying over the Owen Stanley Ranges concerned "a form of flight and a geographical location well removed from that with which the present case is concerned."[91] It was not suggested that such experience ought to have equipped the respondent with any special knowledge relevant to the present matter.[92] In light of the evidence which supported those findings it is unsurprising that the appellant did not secure a finding that the respondent should have discovered, or that it was reasonable for the appellant to think that the respondent had discovered, the existence of the phenomenon before he was employed.

[62] Upon the trial judge's findings it was foreseeable by the appellant, as an employer who knew or should have known of the phenomenon that newly employed pilots, such as the respondent, might not know of that phenomenon, notwithstanding the taking of all practicable steps available to the employee. When the respondent was employed, the appellant's ability to obtain information, and, indeed, its actual knowledge, in relation to the phenomenon were superior to that of the respondent, notwithstanding the respondent's actual and warranted expertise and experience. (Upon the evidence and the trial judge's findings, that situation remained unchanged at the time of the crash, by which time the respondent had been flying in the region for only a few weeks.[93])

[63] The appellant also emphasised its contention that the duties of care found by the trial judge are incoherent with the Civil Aviation Rules and the provisions in the employment contract requiring the respondent to comply with those rules. Rules 91.201(2) and 91.203 respectively provide that the pilot-in-command of an aircraft "must… ensure the safe operation of the aircraft and the safety of its occupants" during flight time and must "give any commands necessary for the safety of the aircraft and of persons and property carried on the aircraft". Rule 91.301(a)(2) provides that a pilot-in-command "must not operate an aircraft under VFR…at a distance from clouds that is less than that prescribed", the relevant prescription being "clear of cloud and in sight of the surface".[94] Rule 91.301(b) relevantly provides that a pilot-in-command must not "take off or land … or fly in the vicinity of an aerodrome, under VFR when the flight visibility, or the cloud ceiling is less than that prescribed", the relevant prescription being a ceiling of 600 feet and visibility of five kilometres.[95] Rule 91.217 obliges the pilot-in-command before "beginning a flight" to "become familiar with all information concerning that flight including…(1) where practicable, the current meteorological information…(3) the alternatives available if the planned flight cannot be completed…(6) the current

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88 Reasons [126], accepting evidence given by the respondent.
89 Reasons [103], [126].
90 Reasons [67].
91 Reasons [69].
92 Reasons [69].
93 Dodds at T5-58; Schofield at T5-79; Reasons [15]-[20].
94 Rule 91.301(a)(2), Table 4.
95 Rule 91.301(b)(2), Table 6 (which applies in "uncontrolled airspace", such as at Camp 57).

conditions of the aerodrome…of intended use…" That provision should be considered together with rule 135.153, which imposes an obligation upon the holder of an "air operator certificate"[96] to ensure "that, if available, a flight conducted under VFR is planned, flown, and controlled using meteorological information provided by…an aviation meteorological service organisation …or otherwise from a reliable and accurate source." Rule 135.155(a) is also relevant. It provides that the pilot-in-command "shall ensure a flight under VFR is not commenced unless, if available, current meteorological information indicates VFR minima prescribed in 91.301 can be complied with along the route, or that part of the route to be flown under VFR."

[64] Rule 91.201 is concerned with the topic of "safety of aircraft", as the heading to that rule indicates, and rule 91.203 is concerned with the "authority of the pilot-in-command", as the heading to that rule indicates. Those generally expressed rules must be read together with the more specific provisions concerning meteorological information in rules 91.217, 135.153, and 135.155(a). Rule 91.217 concerns only an obligation applicable before a flight, but it illustrates the point that the influence upon the safety of a flight of compliance by a pilot with his or her obligations under the rules may depend upon the provision by others of relevant information, specifically including meteorological information. The appellant accepted in argument that a duty of care framed in terms of providing information as to current meteorological conditions as envisaged by rules 91.217(1) and 135.155(a) would not be incoherent with the rules.[97] It is only a short step from there to a conclusion that the duty of care found by the trial judge [9](a) and (b) of these reasons is also consistent the rules.

[65] The scheme of the rules is inconsistent with the word "ensure" in rule 91.201(2) imposing an absolute obligation upon the pilot of an aircraft that its operation will be safe and all occupants will remain safe during flight time, regardless of whether any unsafety is solely attributable to errors or omissions in information necessarily supplied to the pilot by others. The word may bear such a strict meaning in some legislation, including, for example, in workplace health and safety legislation which imposes a duty upon the employer to ensure a safe workplace but also provides for statutory defences.[98] In some other statutory contexts the word "ensure" is used in "the common and colloquial sense in which 'making sure' is used, that is, as equivalent to ascertaining or satisfying oneself, and does not mean anything in the nature of warranty or guarantee."[99] In this case, the relevant context includes the incorporation of the obligation in an employment contract, under which the employment was to take place in a remote part of the world in which the employer had been operating for many years. I would not construe rule 91.201(2) as being inconsistent with a duty of care by the appellant to warn the respondent of the

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96 An air operator certificate must be held by a person who conducts "air operations", including the carriage of passengers by air for hire or reward: rules 119.3 and 119.5. Upon the evidence at the trial the appellant was the holder of such a certificate: appellant's operations manual (ARB 1392) and standard operating procedures (ARB 1456), and evidence by Joyce (T3-33, 34) and Crook (Ex 21 "Material/Documents Referenced" ARB 717).

97 Transcript 19 June 2017 T1-19. The appellant's argument that such a duty was not breached is discussed with reference to ground (g).

98 See, for example, *Bourk v Power Serve Pty Ltd* (2008) 175 IR 310; *Powercoal Pty Ltd v Industrial Relations Commission of NSW* [2005] NSWCA 345, referring to *Workcover Authority of NSW (Inspector Legge) v Coffey Engineering Pty Ltd (No 2)* [2001] NSWIR Comm 319.

99 *Reliance Permanent Building Society v Harwood-Stamper* [1944] Ch 362 at 373 (Vaisey J), applied by Williams JA in *Gration v C Gillan Investments Pty Ltd* [2005] 2 Qd R 267 at [7]; see also per Muir J at [53]-[57] and per Wilson J at [80]-[85].

existence in that part of the world of a meteorological phenomenon creating serious risks to aviation safety of which the employer was, or should have been, aware and of which the employed pilot was reasonably unaware.

[66] Such a duty is also consistent with the division of responsibilities in the rules, particularly bearing in mind three related provisions of the rules: rule 91.217 qualifies the obligation of the pilot to obtain current meteorological information by the expression "where practicable", the availability of current meteorological information qualifies the pilot's more specific obligation in rule 135.155(a), and rule 135.153 imposes obligations upon the air operator to ensure the use in VFR flights of available meteorological information. Importantly, such a duty is apt to assist the pilot in fulfilling his or her responsibilities for the safety of the aircraft and its occupants during the flight.

[67] In relation to rule 91.301, the trial judge's findings are to the effect that at the relevant time and place a pilot's helicopter might suddenly and unexpectedly be enveloped by thick cloud even though, before that event, the pilot has remained clear of cloud and in sight of the surface and has not flown the helicopter when the flight visibility or cloud ceiling was less than prescribed. No doubt a pilot must diligently strive to avoid being caught by any such event, but it is difficult to accept that the rules are intended to preclude a pilot who is caught in that situation from thereafter operating the helicopter in an attempt to avoid the otherwise inevitable crash. The duty found by the trial judge does not impinge upon the pilot's duty under rule 91.301.

[68] The appellant referred also to rule 71.111, which obliges the Director of Civil Aviation to classify as Class F airspace uncontrolled airspace (which includes the airspace at the site of the crash) where the Director considers it necessary in the interests of aviation safety that all flights receive a "flight information service" if requested. A "flight information service" is defined to mean "an air traffic service provided for the purpose of giving advice and information intended for the safe and efficient conduct of flights." To the extent that this might involve information about the meteorological conditions, the provision in rule 71.111 does not cut down the obligation in rule 135.153, already discussed. The relevant airspace was Class F, uncontrolled airspace. The appellant referred also to provisions in a part of the rules concerning "special use airspace". Rule 73.55 empowered the Director to designate airspace "as a danger area, to notify operators that there is danger to aircraft flying in the area." The relevant airspace was not so designated. Rule 91.129(b) prohibits a person from operating an aircraft within a designated danger area unless the person has established, after specified consideration, that the activity will not affect the aircraft's safety. The appellant submitted that these provisions reveal two relevant facts: if the phenomenon existed, one would expect the area to have been designated at least as a danger area, if not a prohibited area, and the circumstance that a pilot may make a decision to fly in a designated danger area if the pilot decides after due consideration that this will not affect the aircraft's safety, is an additional example of the complete authority afforded to the pilot. The first point is not relevant to the duty of care issue. The second point is relevant, but the provision in rule 91.129 applies only where the pilot has been informed of a designation of a danger area. It is not incoherent with a duty of care under which an employer, who knows or should know of particular danger in an area which has not been designated as a danger area, is obliged to warn employed pilots who reasonably may be unaware of the danger.

[69] The appellant submitted that, apart from any direct inconsistency between the rules and the duties of care the rules established that the primary responsibility for the safety of passengers in the helicopter is placed upon the pilot-in-command and the responsibility for, and the knowledge and assessment of, climatic conditions and decisions about, appropriately safe landing locations are entirely matters for the pilot. Certainly very important responsibilities are imposed upon pilots, but the rules themselves reveal that responsibilities for the supply of relevant information, including meteorological information, are also imposed on others, including those who, like the appellant, conduct commercial air operations. In that context, the appellant's characterisation of the rules that the pilot has "primary" responsibility for the safety of passengers is not inconsistent with the employment relationship imposing upon the appellant a duty of care to ensure that the pilot-in-command is informed about a meteorological phenomenon and associated risks, of which the employer is, or should be, aware and the pilot might reasonably be unaware.

[70] Although, I have concluded that the duty in [9](c) of these reasons was not part of the respondent's case, I will explain my conclusion that it is not incoherent with the rules. The appellant did not contend that anything in the Civil Aviation Rules precluded the appellant from prohibiting flight into the helipad at Camp 57 in circumstances in which the "prescribed conditions" mentioned in that duty were present. It might well be inconsistent or incoherent with those rules to impose a duty of care which required the appellant to direct pilots to land at a particular place determined by the appellant, rather than the pilot, to be a "safe area", when the prescribed conditions occurred at Camp 57. But the duty found by the trial judge should not be understood as permitting such a direction; rather, it would remain a matter for the pilot to decide upon the appropriate landing area in circumstances in which the originally intended destination had become unsafe. For that reason and the reasons already given, the duty in [9](c) would not conflict with any of the rules to which the court was referred.

[71] There is no inconsistency or incoherence between any of the Civil Aviation Rules and contractual provisions upon which the appellant relies and the duties of care in [9](a) and (b) and [9](c) of the reasons.

Breach of Duty:

Ground (b) **The Primary Judge erred in concluding the first defendant has breached the duty of care.**

Ground (d) **The Primary Judge erred in fact in finding the plaintiff was not told he could be enveloped in cloud in the way he was on 20 April 2006 when his own evidence was directly contrary at T3-18, Ln.34.**

Ground (f) **The Primary Judge erred in finding a breach of duty against the first defendant in the absence of evidence as to a safe alternative system of work.**

Ground (g) **The Primary Judge erred in concluding the first defendant did not implement a local regime for monitoring weather in the region of Camp 57 in the absence of such a case being brought by the plaintiff against the first defendant and in the face of the evidence of aviation coordinator Mr Kym Moyle.**

[72] The appellant appropriately treated the general contention in ground (b) as adding nothing to the other three grounds, which identify the suggested errors in the trial judge's finding that the appellant breached its duty of care.

[73] The appellant argued that the finding that the appellant breached its duty to warn the respondent of the meteorological phenomenon was based upon three incorrect conclusions:

(a) First, that the locale in question in the Southern Highlands of Papua New Guinea was unusually dangerous because it was susceptible to the rapid formation of cloud, a phenomenon that was unique to that locale.

(b) Secondly, that the respondent was unaware of that dangerous phenomenon and the appellant ought to have warned the respondent of it because the respondent was flying an aircraft which did not have instruments that would have allowed him to navigate in a white-out.

(c) Thirdly, if the respondent had been given such a warning, he would have heeded the warning of Moyle and not attempted to land that helicopter at Camp 57, but instead diverted to Camp 810 as Moyle suggested.

[74] The third conclusion concerns the causation issue, which is discussed under the next heading. The appellant's arguments that the first and second conclusions are incorrect should be rejected for the reasons already given and for the following reasons.

[75] The appellant's argument under ground (d) that the trial judge erred in finding that the respondent was unaware of the phenomenon is inconsistent with the appellant's primary case that there was no such phenomenon. The argument is based principally upon the following passage in the transcript of the respondent's evidence:

> "MR GRIFFIN: Right. Now, you said that you were given tuition in bad weather procedures when you took on this work. Were you ever told that you could be enveloped in cloud in the way you were on the 20th of April 2006?---I was – we did video units - - -
>
> Well - - -?--- - - - on a – but yeah - - -
>
> - - - Yes or no?--- - - - I've never seen cloud - - -
>
> Yeah?--- - - - this fast in my time, even now - - -
>
> HIS HONOUR: No?---Sorry.
>
> Just limit yourself to answering the question now.
>
> MR GRIFFIN: And - - -
>
> HIS HONOUR: It's just were you ever told in this stage you were working in initially with the company, being broken in, as it were, whether or not you could be enveloped in cloud that quickly?---I would say not.
>
> MR GRIFFIN: All right. And had you known that you could be enveloped in cloud as quickly as you were on the 20th of April, would you have been prepared to fly in a helicopter that did not have horizon gauges?---No, I would not."[100]

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100 T3-18, 3-19.

There was evidence that the respondent was first given theory training for a week from 16 February 2006 (and thereafter on dates mentioned in the respondent's log book and his evidence), and subsequently was given practical training in the Mount Hagen area from 24-26 February and on 1 March 2006 (and thereafter in the Sisibia district).

[76] The appellant acknowledged that the quoted passage was a sufficient basis for a finding that when the respondent was working "initially" he was not told that the helicopter could be enveloped in cloud, but the appellant argued that the passage did not justify a finding that the respondent was never given that information. The appellant submitted that the first two words ("I was") of the respondent's answer to the first question (whether he was "ever" told that he could be enveloped in cloud) incontrovertibly established that the respondent was warned of the phenomenon.

[77] The appellant sought support for that argument in what was submitted to be the relevant context. The appellant referred to the respondent's pleaded case that atmospheric and weather conditions in the Southern Highlands were matters of common knowledge, and matters of which the second defendant, as employer,[101] should have been aware, and "the second defendant should have been aware that the route that the plaintiff travelled … was a region in which thick cloud might develop very quickly and that a helicopter may be unavoidably enveloped by cloud causing a pilot to lose visibility."[102] The evidence did not reveal that the phenomenon encountered by the respondent was a matter of common knowledge, and the appellant denied that the phenomenon existed at all. The appellant also referred to the respondent's evidence of his flying experience in Papua New Guinea, including reference to flying over the Owen Stanley Range. I have already noted that it does not follow that the respondent had previously encountered the phenomenon or that the appellant could reasonably conclude that he had. The appellant referred also to the extensive training provided by the appellant to the respondent between 16 February and 1 March 2006 and subsequent training in the Sisibia area,[103] but the trial judge found that the respondent was given no specific instruction about cloud or training in respect of flying in fog or white-out conditions.[104] That finding is not vulnerable to challenge. It reflected the respondent's evidence and the appellant did not adduce any evidence that the training included any warning that cloud could form out of the ordinary speed in the late afternoon in the region where the respondent would be working.

[78] The initial words of the quoted passage "I was" might have been directed to the introductory statement by the cross-examiner that the respondent had been given tuition when he took on the work. Alternatively, those words might have been the start of an answer in which the respondent intended to say that he was not ever told about being enveloped in cloud in the way he was on the day of the accident. Whilst it is logically possible that those words were instead intended as an agreement that the respondent was told about the phenomenon, that is inconsistent both with the respondent's evidence-in-chief that he did not receive any instructions from the appellant's trainers about cloud,[105] and with the last two answers in the quoted passage. The trial judge, who was in a much better position than the Court of

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101 The trial judge found that the second defendant was not the respondent's employer and was not liable to the respondent.

102 Further and better particulars 15th September 2010, [6.3].

103 Reasons [109]-[120].

104 Reasons [120], [125]-[126].

105 T1-39.

Appeal to determine what, if anything, was conveyed by the words "I was", cited the passage and found that the respondent did not know of the phenomenon or the consequentially heightened risk of inadvertent IMC occurring at the relevant time and place.[106]

[79] The appellant did not seek to support ground (f) by argument. It seems self-evident that minimal difficulty and expense would have been involved in the appellant fulfilling the duties of care in [9](a) and (b) of these reasons.

[80] The contention in ground (g) is that the respondent did not bring a case that the appellant did not implement a local regime for monitoring weather in the region of Camp 57. The appellant accepted in argument that a duty of care framed in terms of providing information as to current meteorological conditions as envisaged by rules 91.217(1) and 135.155(a) would be consistent with the Civil Aviation Rules but argued that any such duty was not breached because Moyle provided the appropriate advice that there was fog at Camp 57 and that, if necessary, the respondent could divert to Camp 810 where it was clear. However, the trial judge found that Moyle did not pass on to the respondent the message from Camp 57 that the helipad was "closed due to fog".

[81] That issue though does not concern breach of the duty in [9](c) of these reasons, which concerns conditions in which there is a risk of a helicopter being enveloped by cloud forming at an out of the ordinary speed. No evidence was directed to the expense or practicability of a system of work under which pilots could be given notice that such conditions existed or might develop. That is consistent with my conclusion that the respondent did not bring a case against the appellant that it breached the duty mentioned in [9](c) of these reasons.

Causation:

Ground (c) **The Primary Judge has erred in concluding that any identified breach of duty of care was causally linked to the damages sustained by the plaintiff.**

[82] The appellant argued that causation could not be established because the trial judge found that the transmission by Moyle did occur and was heard by the respondent but his own evidence was that if he had received "the transmission", he "would have gone straight to 810".[107] That evidence was given in response to the suggestion in cross-examination that Moyle said, not only that there was fog at Camp 57, it was clear at Camp 810 and if needed Moyle could ferry the workers to Camp 57 in a vehicle, but also, "Don't go there". Moyle did not give a specific instruction prohibiting the respondent from proceeding to Camp 55. Moyle's conduct in not replying to the respondent's statement that he would "have a look" at Camp 57 suggested that Moyle agreed with the respondent's perception that it was safe to do so.[108] That is consistent with Moyle's own evidence that it was a matter for the pilot's discretion of how to proceed in such a case and with Connolly's evidence that the course the respondent adopted was not inappropriate.[109] Causation in

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106 Reasons [126].
107 T2-61.
108 Reasons [168].
109 T4-76, which evidence was accepted at Reasons [175].

relation to the duties of care in [9](a) and (b) of these reasons was established for the trial judge's reasons summarised in [10] of these reasons.

Breach of contract, contributory negligence, and contractual set-off:

Ground (m) **The Primary Judge erred in finding the first defendant was in breach of contract and further erred in failing to find the plaintiff was guilty of contributory negligence in circumstances where the plaintiff on the previous flight had flown through cloud, was warned of the cloud, and advised to divert to a safe alternative landing site (8/10) and in fact saw cloud prior to the fatal collision but nonetheless attempted to land in cloud.**

[83] The trial judge rejected the appellant's contentions that the respondent's own negligence caused or materially contributed to the accident in that the respondent failed to fly as required by VFR, failed to operate the helicopter clear of fog or cloud, deliberately flew the helicopter into fog or cloud, failed to heed the warning of Moyle that the helicopter pad at Camp 57 had been affected by fog, failed to divert the helicopter to a clear and safe alternative landing pad, and failed to cause the helicopter to steer clear of fog or cloud. The trial judge observed that the respondent's decision upon receiving Moyle's transmission to continue towards Camp 57 to "have a look" did not involve negligence by him in the circumstances that he knew, or he ought reasonably to have known. The ensuing inadvertent IMC was also not the result of his negligence. His approach manoeuvre was "unremarkable but for the fact, of which Hevilift had not warned him, that at that time of day in that region there was a heightened risk of inadvertent IMC because cloud could form at a speed which was out of the ordinary."[110]

[84] The appellant's outline of argument advanced various challenges to the trial judge's decision that the respondent was not guilty of contributory negligence, but at the hearing of the appeal the appellant acknowledged that its arguments upon this topic are all premised upon two assumptions in its favour; first, that the employment contract did not include an implied term corresponding with the duty of care found by the trial judge and, secondly, that the trial judge was wrong in concluding that the respondent's helicopter was enveloped by cloud that formed at an out of the ordinary speed. The second assumption is incorrect for the reasons given in relation to grounds (i) and (l).

[85] As to the first assumption, the parties agreed at the trial that, unlike the Australian States, Papua New Guinea had not enacted legislation reversing the effect of the decision in *Astley v Austrust* that, under the common form contributory negligence statutes, contributory negligence is not a ground for reducing the damages awarded to a plaintiff for breach of contract.[111]

[86] The trial judge held that the appellant was liable both for breach of the tortious duties of care and for breach of the same duties under an implied term that the appellant would take reasonable care not to expose employees to unnecessary risks to their health or safety. The appellant argued that the term should not be implied

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110 Reasons [215]-[216].

111 Defendants' submissions, [17.3], [17.4]. The appellant referred to the *Wrongs (Miscellaneous Provisions) Act* 1975 *PNG*.

because it is inconsistent with express terms of the contract. The argument relied upon the same contractual provisions referred to in argument under grounds (a) and (h). In addition, the appellant argued that if the term otherwise should be implied it is excluded by the "entire agreement" provision in clause 22 of the employment contract.

[87] The respondent referred to *Wright v TNT Management Pty Ltd*,[112] in which the New South Wales Court of Appeal held that a term is implied by law in an employment contract that the employer will take reasonable care to provide a safe system of work. Similarly, in *Stubbe v Jensen*,[113] the Victorian Court of Appeal held that, subject only to one issue it was not necessary to decide, concurrently with the duty of care under the common law of negligence, there was a term implied by law in employment contracts that the employer would provide a safe system of work and would not unreasonably expose an employee to unnecessary risks. (The issue it was not necessary to decide concerned Deane J's observation in *Hawkins v Clayton*[114] that the common law should not imply a contractual term imposing a duty of care when a duty of care is in any event imposed by the common law.[115] That reasoning was rejected by the High Court in *Astley v Austrust Ltd*.) This Court should follow those decisions.

[88] A term will not be implied by law if it is excluded by an express provision of the contract or is inconsistent with its terms.[116] The appellant's argument that the implied term is inconsistent with the express terms concerning the respondent's expertise and the Civil Aviation Rules should be rejected for the reasons given in relation to grounds (a) and (h).

[89] Clause 22 of the employment contract provides that it "records the entire agreement between the parties as to the subject matter and, in relation to that subject matter, supersedes any prior representations, understandings, arrangements, warranties or agreements." The appellant did not develop its argument that clause 22 excluded the implied term or cite any authority for that proposition. The implied term is plainly not a "prior" representation, understanding, arrangement, warranty or agreement. Presumably the appellant's argument relies upon the statement that the employment contract "records the entire agreement between the parties as to the subject matter." An indistinguishable clause was held to be ineffective to exclude an implied term in *National Roads Motorists' Association v Whitlam*.[117] Campbell JA, with whose reasons Beazley JA and Handley AJA agreed, observed that it "is not an agreement that there are no implied terms in the deed: *Hart v MacDonald* (1910) 10 CLR 417 at 421 per Griffith CJ 427 per O'Connor J, 430 per Isaacs J."[118] *Whitlam* and *Hart v MacDonald* were not concerned with a term implied by law, but Campbell JA's analysis is applicable.

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112 (1989) 15 NSWLR 679 at 687-688 (McHugh JA) and 697-698 (Clarke JA); cf per Mahoney JA at 684 (who accepted that it was arguable but did not decide the point).

113 [1997] 2 VR 439 at 443 (Winneke P, with whose reasons Ormiston and Callaway JJA agreed).

114 (1988) 164 CLR 539.

115 (1988) 164 CLR 539 at 582-586.

116 *Byrne v Australian Airlines Ltd* (1995) 185 CLR 410 at 449 (McHugh and Gummow JJ); *Concut Pty Ltd v Worrell* (2000) 75 ALJR 312 at [23] (Gleeson CJ, Gaudron and Gummow JJ).

117 (2007) 25 ACLC 688.

118 (2007) 25 ACLC 688 at [97].

[90] The decision in *Hope v RCA Photophone of Australia Pty Ltd*[119] that an entire agreement clause excluded the term sought to the implied is distinguishable. In that case the clause was much broader that clause 22. In addition to providing that the agreement contained the parties' entire understanding with reference to the subject matter, it provided that "there is no other understanding agreement warranty or representation express or implied in any way binding extending defining or otherwise relating to the equipment or the provisions hereof on any of the matters to which these presents relate." Another ground for distinguishing the decision is that the implication in that case did not arise from the express words of the contract.[120]

[91] The language of clause 22 is wholly inapt to exclude a term implied by law in the employment contract.

[92] It follows that ground (m) must be rejected.

Ground (n) The Primary Judge erred in failing to find the plaintiff was in breach of contract and was liable to a set-off to be quantified.

[93] The trial judge referred to the appellant's summary in its written submissions at trial of the respondent's alleged breaches of contract, as breaches flowing from a failure to fly the helicopter with reasonable care and skill.[121] After noting that the appellant's arguments relied significantly upon inferences that the respondent flew deliberately or negligently into cloud, the trial judge observed that he had rejected that notion, found that the respondent did not fly into cloud, and concluded that the helicopter became enveloped by cloud which formed around it; it was not a case of a pilot recklessly flying into too narrow a gap between existing cloud and finding cloud moving into the path of the aircraft.[122] If the respondent had known the cloud could form so quickly around his helicopter, it might readily be accepted that the respondent had failed to exercise reasonable care and skill by attempting to fly into Camp 57, but he did not know of such a phenomenon and it was out of the ordinary for pilots not used to flying in the region. Although the respondent had been warned of the presence of fog at Camp 57, his decision to approach the area to ascertain whether a safe flight path was precluded by fog was made without demur by Moyle and in ignorance of the phenomenon of extraordinary formation of cloud in that region and at that time of day; and there was in fact a sufficiently broad path of clear air to apparently allow a safe flight path. The envelopment of the helicopter was the result of the appellant not warning the respondent about the phenomenon and the accompanying increased risk of inadvertent IMC. It was not a consequence of a want of reasonable care and skill by the respondent, with the result that the respondent had not breached the contract.[123]

[94] In the appellant's amended outline of argument, the appellant referred to various alleged breaches of contract by the respondent but at the hearing of the appeal the appellant confined its case to two alleged breaches of contract.[124] The first is an

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119 (1937) 59 CLR 348.

120 See *Sai Teys McMahon Real Estate Pty Ltd v Queen Street Apartments Pty Ltd* [2007] QSC 264 at [75] (Chesterman J) and *Etna v Arif* [1999] 2 VR 353 at 371 [46] (Batt JA) (Charles and Callaway JJA agreeing).

121 Reasons [210].

122 Reasons [211]-[213].

123 Reasons [214].

124 Transcript 19 June 2017 T1-54 L14-33 and T1-57 L42- 47.

alleged breach of a statement which the respondent appeared to accept was in documents the respondent received during training:[125] "Where en route the weather conditions are encountered that prevent the continuation of the planned track…the pilot must be satisfied he has both the necessary fuel and necessary navigational capability for attempting an off-track diversion…if in doubt turn around and go back." If the appellant gave the respondent a direction to that effect, and if the respondent failed to comply with that direction, the respondent might have been liable for a breach of the provision in clause 3.1(f) of the employment contract, which requires the employee to "comply with all lawful directions of the Company issued from time to time." But there is no basis in the evidence accepted by the trial judge for a finding that at the relevant time the respondent was not satisfied that he had the necessary navigational capability or that the respondent was in fact in doubt, such as might have required him to "turn around and go back".

[95] The second alleged breach of contract upon which the appellant relied was an alleged contravention of clause 3.1(h) of the employment contract. It requires the employee to "comply with all law applicable to the Employee's position". The appellant argued that the respondent breached that clause by failing to comply with rules 91.301 and 91.201 of the Civil Aviation Rules. That argument should be rejected for the reasons given in relation to ground (a).

[96] Accordingly the appellant failed to establish either of the breaches of contract upon which it relied in support of ground (n).

[97] There are some other issues that should be mentioned, although it is not necessary to resolve them. Although the appellant's written submission at trial referred to a counterclaim,[126] the pleading in the appeal book does not include a counterclaim. According to the defence, what is to be set-off against the respondent's damages are damages for the loss of the helicopter and consequential expenditure, loss of profits and other costs allegedly caused by the alleged breaches of contract,[127] but in oral argument at the hearing of the appeal the appellant contended that it was entitled to counterclaim for an indemnity for breach of contract, which I understood to mean damages in the amount of the appellant's liability to the respondent for the appellant's breach of contract. Such a counterclaim was said to be supported by obiter dicta in two paragraphs of the reasons of Ambrose J in *Wylie v The ANI Corporation Limited*.[128] Ambrose J acknowledged that the point was not argued but observed that he thought it arguable that, where an employee's injury, loss, and damage resulted in part from the employee's negligence and breach of contract of employment, it would be open to the employer on the facts of that case to counterclaim for an indemnity to the extent of the contribution found against the employer "or perhaps the whole of its liability to him". That view was said to be based upon the majority decision in *Lister v Romford Ice and Cold Storage Co Ltd*[129] that an employer can sue an employee for damages representing the amount of the employer's vicarious liability for damages for personal injury suffered by a third party where the cause of that liability is the employee's breach of an implied term of the employment contract to exercise reasonable care. Such a decision could

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125 Reasons [123].
126 Defendants' submissions p 47.
127 Amended defence of the appellant at [33].
128 [2002] 1 Qd R 320 at [80] and [81].
129 [1957] AC 555.

not be made in most jurisdictions in Australia because of the introduction of legislation after *Lister's* case precluding such claims for damages by employers against employees in the absence of serious and wilful default.[130] It appears that there is no such legislation in Queensland.[131] The Court was not informed whether or not there is legislation of that kind in Papua New Guinea. Finally, the basis upon which the hypothetical counterclaim for general damages for breach of contract could be the subject of a set-off against the respondent's entitlement to damages was not explained.

Proposed order

[98] The appeal should be dismissed with costs.

[99] **PHILIPPIDES JA:** I have had the advantage of reading the reasons for judgment of Fraser JA. I agree with his Honour's reasons and the order proposed.

[100] **FLANAGAN J:** I agree with the order proposed by Fraser JA and with his Honour's reasons.

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130 See, *Employees Liability Act* 1991 (NSW) s 3(1); *Law Reform (Miscellaneous Provisions) Act* 1955 (ACT) s 21; *Wrongs Act* 1936 (SA) s 27C; *Law Reform (Miscellaneous Provisions) Act* 1956 (NT) s 22A; *Civil Liability Act* 2002 (Tas) s 49B.

131 *AR Griffiths & Sons Pty Ltd v Richards* [2000] 1 Qd R 116.