

Safety in the air begins with safety on the ground

David Chitty reports on Malaysian Airlines Flight MH17 and potential WHS breaches.

Introduction

When the Boeing 777-200 airliner of Malaysian Airlines Systems (MAS, as it was then called) with the flight number MH17 was shot down over the Ukraine at 1320 UTC on July 17 2014 the passengers and crew were supposed to be protected by various statutory regimes or regulatory frameworks. These included domestic operational safety of flight Acts, associated regulations (which incorporate various international safety standards or Annexes) and workplace/occupational safety laws which protect, via criminal sanctions, a person (applies to both crew and passengers) from being *placed at risk* of death or injury through numerous workplace activities or undertakings.



Sunflowers surround the downed MH17 crash site on the outskirts of the village of Rassypnoye. Photo: Kate Geraghty / Fairfaxphotos

There has been much outrage and anger directed towards the separatists on the ground who ‘pulled the trigger’ on the BUK missile system and the Russian Federation who allegedly supplied the weapon. But there has been a conspicuous silence towards the aircraft operator and its ‘accountable personnel’ (sometimes called ‘post-holders’ on the applicable Air Operators Certificate (AOC) issued by the relevant state authority) and the Malaysian Department of Civil Aviation whose apparent omissions and passive approach to flight safety and risk/hazard identification allowed the aircraft to be placed into the path of a material risk.

Of interest, is the following extract from the Malaysian Department of Civil Aviation AIC 17/2005 which states, the *function and purpose* of the operator and the department as:

The safe conduct of air operations is achieved by an operator and DCA working in harmony towards a common aim. The functions of the two bodies are different, well defined, but complementary. In essence, the operator complies with the standards set through putting in place a sound and competent management structure. The DCA working within a framework of law (statutes) sets and monitors the standards expected from the operator.

This paper is an opinion piece and is not intended to treat exhaustively the operation of Malaysian law, nor to express any concluded view in respect of the possible liability of any person under that law. It does however, provide a topic for discussion as to whether any negligence of the operator could be classified as gross negligence or recklessness, and therefore in

some jurisdictions, lead to a possible ‘corporate manslaughter’ type prosecution.

To quote Cummins J in *DPP v Esso Australia Pty Ltd* ‘...The provision by employers of a safe workplace and safe systems of work is a serious matter’.

The incident

298 people were killed (including 27 Australians) and the aircraft (registration 9M-MRD) was destroyed by a single missile fired from the ground by a Russian built BUK surface to air missile system operated by Russian backed separatists who were engaged in a *known* armed conflict within the Eastern Ukraine. This type of missile system can reportedly engage targets at maximum altitudes of 70,000 to 80,000ft .

The aircraft (MH17) was in level-flight at an altitude of Flight Level 330 (33,000ft) and was flying 1000ft above the upper limit (FL320) of a significant restricted area (NOTAM A1383/14 and A1492/14 applied) which was issued by the Ukraine authorities due to the armed conflict and the shooting down by missile of an Antonov An-26 aircraft with the loss of 49 lives on 14 July 2014. It should be noted that between 22 April 2014 and 17 July 2014 there had been a confirmed number of 15 downed military aircraft (not including MH17) above the Eastern part of the Ukraine.

Foreseeable exposure to risk

While the risk(s) to which the crew and passengers were exposed manifested itself with the shooting down of MH17,

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it should be noted that other carriers who also exposed their employees and passengers to the 'real and not trivial or fanciful' risks associated with overflying a known war zone would also no doubt be potentially liable to conviction from similar WHS legislation within their own state jurisdictions. This aspect of other carriers' liability will not be explored further in this paper.

Malaysian workplace safety legislation

Accidents within the public transport sector (particularly buses, trains and ferries) within Malaysia have prompted calls for a comparative study looking at both the UK and Australian legislation which can impose criminal liability to corporations for significant workplace accidents.

The principal Act in Malaysia dealing with workplace health and safety is the *Occupational Safety and Health Act 1994* (Act) which makes provision for securing the safety, health and welfare of persons at work and for protecting others against risks to safety or health in connection with the activities of persons at work. The Act also establishes the National Council for occupational safety and health and associated connected matters.

The industries that the Act applies to are tabled at the First Schedule, and at para 6 of the Schedule include transport and at para 10, public services.

It should be noted that the Act at section 3(1)(b) specifically includes aircraft as work premises.

The objects of the Act are stated as:

- (a) to secure the safety, health and welfare of persons at work against risks to safety or health arising out of the activities of persons at work;
- (b) to protect persons at a place of work other than persons at work against risks to safety or health arising out of the activities of persons at work; (c) to promote an occupational environment for persons at work which is adapted to their physiological and psychological needs;
- (d) to provide the means whereby the associated occupational safety and health legislations may be progressively replaced by a system of regulations and approved industry codes of practice operating in combination with the provisions of this Act designed to maintain or improve the standards of safety and health.

The objects of the Act are quite clearly to secure the safety, health and welfare of both the employees (for example the flight crew of MH17, however, there could have been other staff on board the aircraft who could have been on duty for example

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travelling engineers or 'paxing' flight crew) and other persons against risks to safety or health arising out of the activities of persons at work.

The risk does not need to manifest itself (ie being shot down over a known war zone). Just to have been exposed to the risk would be sufficient for the purposes of the Act.

The general duty of employers to their employees is provided at s 16 of the Act and it states that the duty of every employer is to ensure, so far as is practicable the safety, health and welfare of all his (sic) employees, which includes in particular:

- (a) the provision and maintenance of plant and systems of work that are, so far as is practicable, safe and without risks to health;
- (b) the making of arrangements for ensuring, so far as is practicable, safety and absence of risks to health in connection with the use or operation, handling, storage and transport of plant and substances;
- (c) the provision of such information, instruction training and supervision as is necessary to ensure, so far as is practicable, the safety and health at work of his employees;
- (d) so far as is practicable, as regards any place of work under the control of the employer or self-employed person, the maintenance of it in a condition that is safe and without risks to health and the provision and maintenance of the means of access to and egress from it that are safe and without such risks;
- (e) the provision and maintenance of a working environment for his employees that is, so far as is practicable, safe, without risks to health, and adequate as regards facilities for their welfare at work.

S17 of the Act provides for the general duties to of employers to persons other than their employees and states:

- (1) It shall be the duty of every employer and every self-employed person to conduct his undertaking in such a

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manner as to ensure, so far as is practicable, that he and other persons, not being his employees, who may be affected thereby are **not thereby exposed to risks** to their safety or health.

- (2) It shall be the duty of every employer and every self-employed person, in the prescribed circumstances and in the prescribed manner, to give to persons, not being his employees, **who may be affected by the manner in which he conducts his undertaking, the prescribed information on such aspects of the manner in which he conducts his undertaking as might affect their safety or health.**

The qualification ‘so far as practicable’ must be considered having regard to the severity of the risk, the knowledge of the risk and the availability of alternative means of removing or mitigating the risk. Therefore, the requirement to properly assess the risk is present in both Malaysian aviation legislation and the Act. The Final Report of the Dutch Safety Board makes it quite clear that Malaysian Airlines did not conduct an additional risk assessment to identify the hazards associated with flying over the known war zone of the Eastern Ukraine:

Malaysia airlines relied on aeronautical information and **did not perform any additional risk assessment.**

A person who contravenes s 15 to s 18 is guilty of an offence and shall, on conviction be liable to fine and/or imprisonment for a term not exceeding two years. However, of note is the Malaysian Penal Code (Act 574) at s 304 (punishment for culpable homicide not amounting to murder – i.e., essentially amounting to recklessness) and s 304A (causing death by negligence) provide for maximum penalties of imprisonment for 10 years or 2 years respectively. The Penal Code however, relates to individuals and not corporations.

Forlin QC states that there are very few reported cases dealing with the concept of corporate criminal liability, and therefore, it is unclear how the doctrine could be viewed or seen unfolding in a contemporary nature but the majority of cases incorporate a ‘directing mind’ theory which means the identification of key personnel who can be said to be the embodiment of the corporation. Malaysian Airlines, for example, could have deemed as the accountable personnel for safe flight operations those who are named on the Air Operators Certificate.

The operator must have nominated an Accountable Manager acceptable to the DCA who has *corporate authority* for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the DCA and any other requirements defined by the operator.

It is therefore essential that additional risks, which are not of the everyday nature and familiarity to high capacity air travel, are proactively identified and mitigated against.

The operator must also have nominated post holders, acceptable to the DCA, who are responsible for the management and supervision of the following areas:

- (a) Flight operations;
- (b) The engineering maintenance systems;
- (c) Crew training; and
- (d) Others (as required)

For an example of this ‘directing mind’ approach see *Public Prosecutor v Kedah & Perlis Ferry Service Sdn Bhd* where Barakbah J said:

‘...a limited company...could not be found guilty of the offence without proof of mens rea of its agents or officers. The persons whose knowledge would be imputed to the company would be those who were entrusted with the exercise of the powers of the company’.

It is, on balance, arguable that the accountable manager and the various post-holders could be deemed to have the ‘directing mind’ for operational decisions and were entrusted with the safety of flight responsibilities of Malaysian Airlines, being the corporate entity.

Mitigation of risk

Before risk can be mitigated to as low as reasonably practicable (ALARP) the risks and hazards must be identified. This is the golden thread or key principle for safe operations within any high risk industry. The identified risks however, must be real and not trivial or fanciful and would be what any reasonable person would appreciate and take steps to guard against. A risk assessment, as a concept, is an exercise in foresight.

The nature of aviation and the associated risks are always present within the industry but the safety management systems and structures that have been developed over many decades makes airline travel incredibly safe and passengers therefore become generally complacent of the inherent risks involved.

These day-to-day risks are high speed, high altitude flight in ever more congested airspace heavily reliant on human performance

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(pilots, ATC and engineers) operating sophisticated machinery in all weathers. It is therefore essential that additional risks, which are not of the everyday nature and familiarity to high capacity air travel, are proactively identified and mitigated against.

These additional risks, which are real and certainly not fanciful, that require proactive assessment by airline operational employees, utilising approved risk assessment procedures, with the necessary application of open or in some cases closed source information which would then conclude with a subsequent decision (safe to operate or not safe to operate and mitigation actions taken) by the accountable manager or post-holders named on the AOC. These additional risk assessments would include considerations in relation to such recent events as:

1. Flight in the vicinity of the Fukushima nuclear reactor;
2. Volcanic activity (e.g. the Icelandic volcanic eruption of 2010);
3. Shoulder launched missiles in the Afghanistan mountains or the Sinai Peninsula;
4. Armed conflict in the Eastern Ukraine;
5. Russian missiles being fired from the Caspian Sea into Syria;
6. Missile tests/launches on the Korean peninsula;
7. Space debris returning to Earth’s atmosphere;
8. Solar flare activity exposure to excessive cosmic radiation (certain NASA forecasts may limit aircraft altitude in polar regions).

The Final Report of the Dutch Safety Board (at 4.3.1) expected the parties (including states, operators and international organisations) to *proactively identify risks* and if necessary adapt their approach to safety and limit these risks to as low as reasonably practicable. The risks that manifested themselves with MH17 were readily identifiable via open source information (for example: ICAO State letter dated 2 April 2014; EASA Safety Information Bulletin; the FAA warning (SFAR113 dated 23 April 2014); in various NOTAMs. It should be noted that eight operators (unnamed in the Dutch Final Report) had reportedly ceased to fly over the area due to uncertainty of the situation in the Crimean region i.e., the known risk.

It is the view of this author that the risks associated with flying over the Eastern Ukraine in mid-July 2014 were real, not trivial or fanciful and were known and foreseeable to airline operators and the various state authorities who had *proactively risk assessed*

the deteriorating situation.

Finally, it must always be remembered that one of the fundamental and universal purposes of occupational safety and health legislation is to protect those who otherwise cannot protect themselves, namely the 283 passengers of MH17 who entrusted their lives to Malaysian Airlines.

Endnotes

1. Malaysian Airlines was rebirthed with a new Air Operators Certificate as Malaysian Airlines Berhad (MAB) on 1 September 2015
2. As concluded by the independent Dutch Safety Board Investigation which released its Final Report on 14 October 2015
3. An AIC for Air Operators Certification and Supervision issued 21 July at paragraph 2.6.5.1
4. 124 A Crim R 200 at 201.
5. 283 passengers and 15 crew-members. For a breakdown of nationalities see section 2.2 of the Dutch Final Report.
6. See pp134 of the Dutch Final Report.
7. The term Flight Level is used globally to allow aircraft to coordinate their atmospheric setting of altimeters above a level called the transition altitude and this altitude varies from state to state, for example in Australia it is 10,000ft.
8. This in itself created risks to the safety of flight due to potential technical malfunctions which may have required the aircraft to descend into the restricted /closed airspace. This aspect was raised in the Dutch Final Report with Malaysian Airlines. However, their response was vague and unsatisfactory (see pp 219 Dutch Final Report).
9. Annex 11 to the Chicago Convention defines NOTAM as ‘a notice distributed by means of telecommunication containing flight information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations’.
10. See fig 77 of the Dutch Final Report at pp182.
11. See for example *R v Merlin Attractions Operations Ltd* [2012] EWCA Crim 2670 where prosecution succeeded despite twenty million visitors having previously visited a site before a fatal accident.
12. Corporate Liability work related deaths and criminal prosecutions Gerard Forlin QC, 3rd Edition 2014 Bloomsbury at para 14.160.
13. Dutch Final Report at section 7.9 (1)
14. My emphasis.
15. Corporate Liability work related deaths and criminal prosecutions Gerard Forlin QC, 3rd Edition 2014 Bloomsbury at para 14.166.
16. [1978] 2 MLJ 221.
17. per Lord Justice Moses in *R v Porter (James Godfrey)* [2008] EWCA Crim 1271.
18. *R v Chagot Ltd* [2009] 1 WLR 1 per Lord Hope at para 27.
19. These procedures would be part of the individual operator’s approved Safety Management System (SMS)
20. MET/H TF3 – IP/2 – ICAO Termination of radioactive cloud SIGMET on Fukushima incident.
21. EASA Safety Information 2014–30R1 (Egypt Sinai Peninsular Airspace)
22. Dutch Final Report at pp225.