SUBMISSION TO THE SENATE RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE

Inquiry into Remotely Piloted Aircraft Systems (RPAS), Unmanned Aerial Systems (UAS) and associated systems

My name is Professor Des Butler. I am a Professor of Law in the Faculty of Law at the Queensland University of Technology (QUT), where I was previously Assistant Dean Research (1997-2002). I am the author or co-author of 20 books, including Butler and Rodrick, *Australian Media Law* (Thomson Reuters) now in its fifth edition, and numerous articles on topics including privacy and negligence, including 'The Dawn of the Age of the Drones: An Australian Privacy Law Perspective' (2014) *University of New South Wales Law Journal* Volume 37(2), pp. 434-470.

I would like to address the following items in the Committee's Terms of Reference, viz:

(e) the relationship between aviation safety and other regulation of RPAS for example, regulation by state and local government agencies on public safety, security and privacy grounds.

(g) insurance requirements of both private and commercial users/operators, including consideration of the suitability of existing data protection, liability and insurance regimes, and whether these are sufficient to meet growing use of RPAS

In particular, I would like to address the potential of RPAS to invade privacy and to cause injury to persons and/or damage to property.

Regulation of RPAS on privacy grounds

When it is borne in mind that alongside various electrical goods and other home appliances retail stores now sell, in some cases for less than $300, camera fitted drones that record high definition video streamed to mobile devices, which can then be easily uploaded to YouTube or other video sharing sites, it is clear that in the wrong hands such devices present a clear and present risk of invasion of privacy. Previous barriers such as high fences and apartments being located on upper floors are no longer insuperable obstacles to voyeurism. There is a pressing case for regulation of RPAS for commercial and recreational use to be accompanied by the implementation of appropriate measures for protection from the invasions of privacy that may follow from such use.

Privacy is protected in Australia by an uneven landscape of state and federal legislation and common law. As I discuss in the above article it is only when viewed through the prism of a specific context, such as the use of cameras mounted on RPAS, that the nuances in the application of these laws may be made apparent and their many deficiencies laid bare.

In the context of RPAS used for commercial or recreational use, privacy is protected in this country by the following:

- The Australian Privacy Principles (APPs) enacted under the *Privacy Act 1988*, which govern inter alia the collection, use and disclose of private information, that is information by which an individual may be identified, by private organisations. A photograph or video of individuals have been regarded as personal information.[1] This privacy regime is subject to a number of limitations, perhaps the most significant of which being that it does not apply to small businesses with a turnover of $3 million or less or private individuals. This means that a large number of operators of RPAS, both for commercial and recreational use, will fall outside the provisions of the APP regime. However, a measure such as extending the application of the APPs to small businesses with a lower turnover and/or individuals may be problematic since the APPs have wide application to data collection in other contexts. Such a measure may therefore lead to unintended consequences.
- Surveillance Devices legislation. At present only five Australian jurisdictions (New South Wales, Victoria, Western Australia, South Australia and the Northern Territory) have enacted legislation governing optical surveillance devices, data surveillance and tracking devices and communication or publication of recordings made by such devices,[2] replacing their previous legislation which was limited to listening devices. They do not take a uniform approach. The differences between these statutes may have significant implications in practice. For example, while all five States provide for offences for the use of optical surveillance devices to observe or record a private activity, 'private activity' is defined differently in the various statutes. For example, the Victorian statute excludes activities carried on outside a building, while the definition in the West Australian and Northern Territory statutes extends to an activity carried on in circumstances that may reasonably be taken to indicate that the parties desire it to be observed only by themselves. South Australia has adopted a similar definition to that in the West Australian and Northern Territory statutes but excludes an activity carried on in a public place, on or in premises or a vehicle if the activity can be readily observed from a public place, or in any other circumstances in which the person(s) ought reasonably to expect that it may be observed by some other person.

  Thus, for example, a person sunbathing in his or her backyard shielded by a high fence may be regarded as engaging in a private activity for the purposes of the West Australian, Northern Territory and South Australian statutes but not the Victorian statute. A person or persons engaging in intimate activities in bushlands may be regarded as engaging in a private activity for the purposes of the Western Australian and Northern Territory statutes but not for the Victorian or South Australian statutes if the bushland is a public area.

  The New South Wales statute takes a completely different approach, prohibiting the installation, use or maintenance of a surveillance device on or within premises or a vehicle which involved entry onto or into the premises or vehicle without the consent of the owner or occupier, or interference with the vehicle or other object without the consent of the person in lawful possession or control. As discussed in the above article the application of the New South Wales statute in the context of a camera mounted RPAS is problematic. It would not

[1] See, eg, *SW v Forests NSW* [2006] NSWADT 74, [31] (Member Handley) (photograph of complainant at work retreat); *Ng v Department of Education* [2005] VCAT 1054, [39] (Deputy President McNamara) (surveillance video of complainant teacher in computer classroom).

[2] *Surveillance Devices Act 2007* (NSW); *Surveillance Devices Act 2016* (SA); *urveillance Devices Act 1998* (WA); *Surveillance Devices Act 1999* (Vic); *Surveillance Devices Act* (NT).

prohibit the observation or recording of, for example, a person sunbathing in his or her backyard, a person engaged in intimate activities in bushland, or even activities occurring indoors provided they were filmed using a camera mounted RPAS that was flown outside the property's boundaries.

The listening devices statutes that continue to operate in Queensland, Tasmania and the ACT[3] are more suited to more limited technological times now decades past. They do not prohibit the use of a camera mounted RPAS to visually observe or record private activities or the communication of such a recording.

- In the absence of a specific common law or statutory cause of action protecting personal privacy, a piecemeal collection of common law causes of action such as trespass, private nuisance and breach of confidence, all of which have limitations which mean that they do not provide complete protection against invasions of privacy.

There have been recommendations for the enactment of a statutory cause of action by the Australian Law Reform Commission (on two occasions), the New South Wales Law Reform Commission, the Victorian Law Reform Commission and, most recently, the South Australia Law Reform Institute. To date no government has enacted those recommendations. While the various recommended causes of action differ in a number of respects, they would all in their own terms address the risk to privacy posed by camera mounted RPAS. Enactment of the statutory cause of action by the Commonwealth in the form recommended by the Australian Law Reform Commission in its 2014 report would therefore be the preferred means of addressing the problem.

However, if such a reform is regarded as too far reaching, the second best option to address the risk to privacy posed by technology such as camera mounted RPAS would be to enact Surveillance Devices legislation that applies consistently throughout the country. There is no justification for inconsistency between jurisdictions. The concept of private activity as defined in Western Australia and Northern Territory is a more flexible concept which is not artificially restricted as in the other jurisdictions, and therefore better attuned to respond to serious invasions of privacy enabled by advances in modern technology. It should therefore form the basis of the uniform approach. Also worth considering in this process as a measure promoting free speech are the provisions in the Western Australian statute concerning the use of surveillance devices in the public interest (ss 24-33). These sections provide for inter alia the 'emergency' use of a surveillance device in the public interest and court application that may be made either upon notice or ex parte to a judge for an order allowing publication or communication in the public interest. However, they will not, not should they, be satisfied for the purposes of publishing material that may merely be of interest to the public.[4]

There are at least two alternatives for achieving such a uniform approach: for the matter to be referred to the Standing Committee of Attorneys General for the development of consistent legislation to be enacted by each state and territory, and for the Commonwealth to legislate to cover the field either by way of amendment to the *Privacy Act 1988* or by way of a dedicated statute. The outdated listening devices statutes in Queensland, Tasmania and the ACT are longstanding despite the advanced technology that is now ubiquitous in modern Australian society. Of the remaining jurisdictions Western Australia was the first to enact a surveillance devices statute in 1998, with South Australia

[3] *Listening Devices Act 1992* (ACT); *Invasion of Privacy Act 1971* (Qld); *Listening Devices Act 1991* (Tas).
[4] *Channel Seven Perth Pty Ltd v 'S' (A Company)* (2007) 34 WAR 325.

the last nearly 20 years later. Notwithstanding existing regimes, later statutes have been cast in different terms. The current position regarding surveillance devices would therefore appear to reflect such disparate agendas among the jurisdictions that it may be better in this instance for the Commonwealth to legislate to address the problem.

If the preferred route is to develop laws governing optical surveillance devices that are applied consistently throughout the country, then in addition to the offences of the type currently provided by state surveillance devices statutes there ought to be provision for aggrieved persons to recover some form of reparation from offenders. As I argued in the above article (at 469):

> While in a democratic society the state may have an interest in preserving the autonomy of its citizens from invasions of their privacy, the value of such prohibitions may depend upon the willingness of the relevant authorities to prosecute transgressions. In any event, it is the individual who has his or her dignity or autonomy affronted that has the greater interest in preventing or redressing the wrong. Any appropriate legislative response should therefore make provision for reparation for individuals who have been aggrieved by invasions of their privacy.

That said, the means for obtaining reparation should be made as simple and inexpensive as possible lest it be an avenue for recourse available only to the well resourced.

In addition, it would be important for measures to be adopted to bring such laws to the attention of prospective operators.

Potential for damage to persons and/or property

There have already been numerous reports of near misses involving RPAS which could easily have resulted in injury to persons or damage to property. For example, in 2013 a quadcopter mounted with a camera struck the Sydney Harbour Bridge and in a disabled state as a result of the collision flew over vehicular traffic before crashing in front of a train.[5] In New York a quadcopter operated by ABC7 New York clipped a building above a busy Manhattan street and crashed onto the footpath, narrowly missing pedestrians.[6] There have also been numerous reports of near misses between aircraft and drones. For example, in the United Kingdom there were 56 reports of such incidents in 2016 up to October[7] and in the United States there were 1133 reports of accidents or near misses involving unmanned aircraft in 2015, a significant increase over the 238 reports in 2014. [8] The risk of catastrophe is very real and cannot be ignored.

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[5] See Belinda Kontominas, 'Mystery Drone Collides with Sydney Harbour Bridge', *The Sydney Morning Herald* (online), 4 October 2013 http://www.smh.com.au/nsw/mysterydrone-collides-with-sydney-harbour-bridge-20131004-2uzks.html; Colin Cosier, 'Crashed Drone's Extraordinary Journey', *The Sydney Morning Herald* (online), 26 November 2013 http://media.smh.com.au/featured/crashed-drones-extraordinary-journey-4955165.html.

[6] 'Small Drone Crashes into New York City Sidewalk', *Huffington Post* (online), 2 October 2013.

[7] Alice Ross, 'Pilots report four drone near misses in a month in UK' https://www.theguardian.com/technology/2016/nov/17/drone-came-within-5-metres-of-passenger-jet-at-liverpool-airport.

[8] *Registration and Marking Requirements for Small Unmanned Aircraft Interim Final Rule 12/16/2015.* https://www.federalregister.gov/articles/2015/12/16/2015-31750/registration-and-marking-requirements-for-small-unmanned-aircraft

The Commonwealth and all States and Territories have enacted *Damage by Aircraft* statutes[9] which provide for strict liability for injury or damage to persons or property on the ground caused by impact with aircraft or part of an aircraft, meaning that aggrieved persons may recover damages without proof of intention, negligence or other cause of action. Due to constitutional restraints the Commonwealth statute only applies to Commonwealth aircraft (other than Defence Force aircraft), aircraft owned by foreign, trading or financial corporations, aircraft engaged in international air navigation or trade or commerce, trade or commerce between the States, and aircraft landing at or taking off from places held by the Commonwealth. It will therefore apply to RPAS operated for commercial purposes by a trading or financial corporation but does not apply to RPAS operated by, for example, individuals or for recreational purposes. These uses may, however, fall within the ambit of State legislation.

A significant question will be whether RPAS constitute 'aircraft' as defined in the various statutes. 'Aircraft' in the Commonwealth statute has the same meaning as in the *Civil Aviation Act 1988* but with the express exclusion of model aircraft.[10] The *Civil Aviation Act 1988* defines an 'aircraft' as 'any machine or craft that can derive support in the atmosphere from the reactions of the air, other than the reactions of the air against the Earth's surface.' 'Model aircraft' is not defined in the *Damage by Aircraft Act 1999* but is defined in the *Civil Aviation Safety Regulations 1998* as 'an aircraft that is used for sport or recreation, and cannot carry a person'. The *Damage by Aircraft* statutes in Queensland and South Australia include the same definition of 'aircraft' as the Commonwealth Act. By contrast, the statutes in the other States do not include a definition of 'aircraft' so there may be argument whether a meaning similar to that applicable to the Commonwealth, Queensland and South Australian statutes should be adopted or whether a dictionary meaning should be adopted. The Macquarie Dictionary meaning of aircraft is 'any machine which can fly in the air, either by being lighter than air (such as balloons) or by the aerodynamic of its surfaces pushing against the air (such as aeroplanes, helicopters and gliders)' while the Shorter Oxford Dictionary definition is a 'machine capable of flight esp an aeroplane or helicopter'. Both of these definitions are apt to catch model aircraft, such as RPAS used for sport or recreation.

The difference in definitions has practical significance. The effect of this legislation is that operation of RPAS will generally be subject to strict liability for injury or damage to persons or property on the ground caused by impact with the RPAS or part of a RPAS. However, due to the express exclusion in the Commonwealth, Queensland and South Australian statutes, damage or injury caused by RPAS used for sport or recreation will not be subject to strict liability in those jurisdictions. Instead in such a case an aggrieved person would need to have recourse to common law causes of action such as negligence, or trespass to person or goods.

Nevertheless, such claims will be of little value if the operator of the RPAS cannot be identified or has insufficient funds to satisfy any damages that may be awarded. This is an important public safety consideration concerning the operation of RPAS. The United States requires online registration of

[9] *Damage by Aircraft Act 1999* (Cth), s 11; Air *Navigation Act 1937* (Qld) Pt 3; *Civil Liability Act 1936* (SA), s 61; *Civil Liability Act 2002* (NSW), s 73; *Damage by Aircraft Act 1963* (Tas), s 4; *Wrongs Act 1958* (Vic), s 31; *Damage by Aircraft Act 1964* (WA), s 5.
[10] *Damage by Aircraft Act 1999* (Cth), s 3.

'unmanned aircraft systems' (UAS) that weigh more than 0.55 pounds (250 grams) and less than 55 pounds, (25 kilograms).[11] The Federal Aviation Administration (FAA) states that:

> Many of the owners of these new [small unmanned aircraft systems] may have no prior aviation experience and have little or no understanding of the [National Air Space], let alone knowledge of the safe operating requirements and additional authorizations required to conduct certain operations. Aircraft registration provides an immediate and direct opportunity for the agency to engage and educate these new users prior to operating their unmanned aircraft and to hold them accountable for noncompliance with safe operating requirements, thereby mitigating the risk associated with the influx of operations … To minimize risk to other users of the NAS and people and property on the ground, it is critical that the Department be able to link the expected number of new unmanned aircraft to their owners and educate these new owners prior to commencing operations.

Existing owners of small unmanned aircraft intended to be used exclusively as model aircraft (ie for hobby and recreational purposes) were required to register by a stipulated date while owners of new small unmanned aircraft intended to be used as model aircraft must be registered prior to the first operation outdoors. There are provisions governing transfer of ownership of the UAS. Requirements for registration are not onerous. Registration of small unmanned aircraft intended to be used as model aircraft requires only the applicant's name, physical address and email address and payment of a nominal fee ($5), while registration of small unmanned aircraft operated for purposes other than as model aircraft requires the same details together with details of the aircraft's manufacturer, model and registration name. Following registration all small unmanned aircraft are required to display a unique identifier in the form of the FAA-issued registration number. More stringent requirements for registration are provided for UAS weighing more than 25 kilograms and those used for commercial purposes.

The FAA regards this web based registration process as 'streamlined and simple … [which] is more appropriate for these aircraft'. It is a model Australia should follow. Apart from the benefits associated with identification of operators in the aftermath of an incident involving a RPAS, the process of registration and required affixing of the unique identifier, together with any education material that can be associated with the process, may be important stimuli for responsible operation of the aircraft.

Naturally the possibility of the operator having insufficient funds to satisfy a damages award raises the need for operators to have adequate insurance coverage for potential damage or injury caused by RPAS. This ought to be a requirement for registration of RPAS for commercial purposes. However it is more problematic for operators of RPAS for recreational purposes including hobbyists and children for whom the costs associated with the imposition of a requirement of insurance may be overly burdensome. It might be thought that RPAS used for such purposes would typically be of a lesser weight than those that would normally be used for commercial purposes and therefore likely to cause less damage. However, as shown by the example of the drone that crashed into the Sydney Harbour Bridge in 2013, the potential for catastrophic accidents is still present even with RPAS of lesser weight. A driver distracted by even a small RPAS may trigger a multi-vehicle collision that could result in not

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[11] *Registration and Marking Requirements for Small Unmanned Aircraft Interim Final Rule 12/16/2015.* https://www.federalregister.gov/articles/2015/12/16/2015-31750/registration-and-marking-requirements-for-small-unmanned-aircraft

only property damage but also serious injury or death. Perhaps the best that can be achieved in such cases would be for educational material associated with registration to highlight the potential for significant legal liability associated with operation of an RPAS as a further means of encouraging responsible operation.

Conclusion

The measures advocated in this submission are readily achievable. While there has not yet been legislation enacting a statutory cause of action protecting personal privacy as recommended by various law reform commissions, parliaments in five State/Territory jurisdictions have already accepted the need for protection for privacy from optical surveillance, data surveillance and tracking devices, albeit in differing terms. There is no reason why the remaining three jurisdictions should not have their surveillance laws brought into the 21st century. The most expeditious way of achieving a uniform approach is by the Commonwealth legislating, preferably based on the Western Australian approach. The suggested regime for registration of RPAS and associated education of operators about the risk of legal liability and safe operation is based on the regime already in place in the United States.

Such measures are not designed to over-regulate the commercial use of RPAS or to take the fun out of recreational use. Instead they seek to strike the appropriate balance between the interests of operators of RPAS and those of other members of the public whose dignity and safety may be placed at risk as a result of the use of RPAS.

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