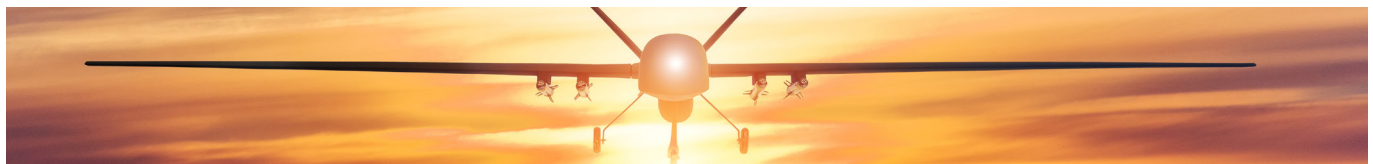


Deploying autonomous aerial vehicles

In the absence of any specific international or domestic legal frameworks of direct relevance, in deploying autonomous aerial vehicles the Australian Defence Force (ADF) must have regard to the following legal frameworks:



| LEGAL FRAMEWORK | SPECIFIC PROVISIONS | IMPLICATIONS FOR THE ADF |
|---|--|---|
| Defence Act 1903 (Cth) | Special measures, including the use of force against aircraft, can be taken by ADF personnel to protect government interests and against domestic violence. Defence Aviation Areas can be designated by the Minister where necessary for the defence of Australia and for 'preventing or reducing hazards' to aircraft and 'aviation-related communications, navigation or surveillance' (Part IXD). | A prevalence of non-military autonomous aerial vehicles in the future may mean that these provisions are more likely to be enacted in order to protect Australian interests. |
| Defence Aviation Safety Regulations | An unmanned aerial vehicle must be controlled by a qualified remote pilot and that remote pilot 'intervention' be possible at 'all stages of the flight'. | These exclude autonomous aerial vehicles from being used by the ADF. This is in line with the ADF Concept for Command and Control of the Future Force (2019) which notes 'command is a fundamentally human function' Technological developments may require a change to these regulations. |
| Convention on Civil Aviation 1944 Civil Aviation Safety Regulations 1998 (Cth) | The Convention provides that "when issuing regulations for their state aircraft ... [States] will have due regard for the safety of navigation of civil aircraft". The Regulations prevent the operation of unmanned aerial vehicles over populous areas or within 30 meters of a person unless very specific criteria are met. | Autonomous State aircraft, which includes military aircraft, must have the ability to comply with civilian communication protocols designed for the safety of civil aviation while completing their flight. |
| Privacy Act 1988 (Cth) | Part IIIC requires Australian Government agencies to report eligible data breaches. | Defence will need to have policies in place to deal with personal information and engage in privacy impact assessments. Defence could be liable to compensate individuals whose privacy is breached by ADF autonomous aircraft or other activities. |
| Radiocommunications Act 1992 (Cth) | The Act does not apply to acts or omissions by Defence members 'the purpose of which relates to ... research for purposes connected with defence' or 'intelligence' but it would generally apply to the ADF. | The ADF needs to be involved in conversations about future spectrum management in Australian in order to make better use of radiocommunication spectrum allocations. |
| Work Health and Safety Act 2011 (Cth) | The Defence Work Health and Safety Strategy 2017-2022 notes that '[a]t times during overseas operations there may be circumstances where [Defence] people are exempt from some provisions. However, the legislative framework will generally be applicable at home for ADF members. | The interplay between defence and civil autonomous vehicles is likely to be the most pressing concern for the ADF in terms of work health and safety. |
| State and Territory Environmental Protection Legislation and Guidelines | Although these laws do not apply to the ADF, the practical consequences they seek to avoid need to be considered. For example, the NSW Environmental Protection Agency has identified potential hazards posed from remotely piloted aircraft operations. | There are risks posed by autonomous aircraft (in some cases even more so than for remotely piloted aircraft) when operating in certain environments which need to be managed by the ADF. |
| Air Navigation Act 1920 (Cth) And Air Navigation (Aircraft Noise) Regulations 2018 (Cth) | These rules do not apply to military aircraft. Further, the Federal Government has recently (2019) commissioned a review of remotely piloted aircraft (RPA) noise to consider the 'community noise impact of [RPA] operations' but this review does not cover noise from military aircraft. | The military has developed RAAF Base Noise Management Plans in order to manage noise concerns however these focus quite heavily on the impact of existing jet engine noise emissions on surrounding populations. The noise impact of autonomous aircraft operations will need consideration by the ADF. |
| Criminal Code Act 1995 (Cth) Division 268 | Any means and methods of warfare (which includes weapons) employed must not be indiscriminate, cause unnecessary suffering, or widespread, long-term and severe environmental damage and must be capable of being used in compliance with the principles of distinction and proportionality when deployed. At all times, there is an obligation to take precautions. | Actions which violate these rules could see ADF members liable for imprisonment for up to 25 years. In the decision making by the ADF to employ military autonomous aerial vehicles in situations of armed conflict, it is imperative that in doing so those operating the relevant platform can be confident that they can comply with their individual legal obligations. |

See further: Eve Massingham, 'Navigating to autonomy: legal questions in use of autonomous aerial vehicles by the Australian military' (2021) 3(1) *Australian Journal of Defence and Strategic Studies* (forthcoming)

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