



ACT
Government

Chief Minister, Treasury and
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Aircraft Operations
Aviation Environment Branch
Department of Infrastructure, Transport, Cities and Regional Development
CANBERRA

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Review of the Air Navigation (Aircraft Noise) Regulations – Remotely Piloted Aircraft

Attached please find the ACT Government's submission in relation to the September 2019 Issues Paper on the Review of the Air Navigation (Aircraft Noise) Regulations 2018 – Remotely Piloted Aircraft.

The ACT Government looks forward to making further contributions to the broad review in due course.

In the meantime, should you need any further information please do not hesitate to contact Charmaine Smith, Senior Director, Regulation and Productivity on [REDACTED] or by email [REDACTED]

Yours sincerely

Sam Engele
Executive Group Manager
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27 November 2019



ACT
Government

ACT GOVERNMENT SUBMISSION

Issues Paper:

**Review of the Air Navigation
(Aircraft Noise) Regulations 2018
– Remotely Piloted Aircraft**

November 2019

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ISSUES PAPER

REVIEW OF THE AIR NAVIGATION (AIRCRAFT NOISE) REGULATIONS – REMOTELY PILOTED AIRCRAFT

Introduction

The ACT Government is pleased to make a submission on the Issues Paper – *Review of the Air Navigation (Aircraft Noise) Regulations – Remotely Piloted Aircraft* - released by the Commonwealth Department of Infrastructure, Transport, Cities and Regional Development in September 2019.

The comments in this paper are directed at the matters raised in the issues paper but include some commentary on broader issues around remotely piloted aircraft systems, unmanned aerial systems and urban air mobility systems. For the sake of simplicity, this submission refers generally to those systems as ‘drones’.

The ACT Government notes that drone usage is growing rapidly and that the drone industry’s technical capabilities and requirements are also changing at pace. It is important that all levels of government do our best to anticipate these advances and develop progressive policy and regulatory frameworks to accommodate them.

The ACT Government’s position on drones and drone noise has been informed by several parliamentary inquiries and government responses including:

- *Eye in the Sky, Inquiry into drones and the regulation of air safety and privacy*, House of Representatives Standing Committee on Social Policy and Legal Affairs, July 2014 and the Australian Government response published in December 2016¹;
- *Current and Future Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems*, Senate Standing Committee on Rural and Regional Affairs and Transport References Committee, July 2018 and the Australian Government response published in November 2018²; and
- *Report No6 - Inquiry into Drone Delivery Systems in the ACT*, Legislative Assembly for the ACT Standing Committee on Economic Development and Tourism, July 2019³.

The ACT Government has been engaging with the opportunities and challenges presented by drone delivery technology through its response to the arrival to Canberra of Wing Australia, a drone delivery service. Wing began trialling drone delivery technology in the ACT in September 2017 and has commissioned research into the effect of noise generated by their drones on fauna and birdlife and the commercial benefits of drone delivery technology for business, consumers and society.

¹ Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/House/Social_Policy_and_Legal_Affairs/Drones/Report

² Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Drones

³ Available at: https://www.parliament.act.gov.au/_data/assets/pdf_file/0007/1394485/9th-EDT-06-Inquiry-into-Drone-Delivery-Systems-in-the-ACT.pdf

The research paper on economic opportunities commissioned by Wing and provided by AlphaBeta Strategy and Economics in November 2018 titled *Faster, Greener and Less Expensive – The Potential Impact of Delivery Drones in the Australian Capital Territory* has significantly helped to inform the ACT Government's position on drones and drone noise⁴.

That research paper, while possibly optimistic, suggests that there is a bright economic future for this kind of technology in the ACT. The ACT Government also notes that complaints about noise generated by Wing drones have been few and have decreased in number since new drone technology was rolled out by Wing earlier this year.

The ACT Government is also keen to understand further how non-commercial application of this technology might benefit the community. One example would be emergency services using drone technology to transport drinking water, food, medical supplies, and mechanical parts to their workers and volunteers operating in rural areas or in urban environments cut off due to floods and fires.

Finally, the ACT Government notes that the ACT already has a relatively strong ecosystem of drone systems and application developers. These include the ACT UAV Developers Association, the Australian National University's Advanced Instrumentation and Technology Centre at Mount Stromlo, the University of New South Wales Canberra Space Research facility, and companies such as Xtek, Codarra Advanced Systems, Aerial Robotics Australia, FPV Australia, Wildlife Drones, Aerovort and SOAPdrones.

Summary of the ACT Government's position on noise regulation

The ACT Government's view is that a nationally consistent whole-of-government approach in the management of drones in Australia is best achieved by the Commonwealth Government continuing to exercise legislative power in regard to navigable airspace, licensing of operators and the design and noise characteristics of drones.

This position reflects the Commonwealth's existing responsibilities for aviation and for international consistency and compliance with international rules. It also reflects the fact that drone flights may cross State and Territory borders, as well as providing some opportunity to utilise existing national compliance and complaints systems.

The ACT Government also generally supports a national approach to future drone regulation, including noise regulation. However, this national approach should be sufficiently flexible to allow for locally appropriate operating conditions.

In summary the ACT's view is that the regulatory framework should incorporate the following elements:

1. Drone vehicle standards (including noise emission standards) should be set by the Commonwealth and be nationally consistent;
2. National operating rules should be set by the Commonwealth that recognise minimum standards to be enforced across Australia, such as in relation to safety, air corridor and drone traffic management, and interactions with other aircraft; and

⁴ Available at: https://www.parliament.act.gov.au/__data/assets/pdf_file/0010/1318753/12-AlphaBeta_web.pdf

3. Licensing of operators should continue to be done at the national level, but with a global condition on all licences requiring compliance with local operating requirements that are set by the licence and reflect the relevant State and Territory local needs to ensure that drones are operated in a manner that is acceptable to their local community.

The ACT suggests that requiring compliance with local operating requirements might result in licenced operators being subject to conditions specific to local areas covering:

- hours of operation;
- limits on frequency of overflights, or maximum number of deliveries to a single address; and
- setting prohibitions on overflights of sensitive areas (such as prisons) and during major events.

In relation to prisons and other places of detention, the ACT Government's view is that a global condition prohibiting overflight of these facilities should be included in the current Standard Operating Conditions found in the Drone Safety Rules and Air Navigation Regulations. This would then apply to all licenced and non-licenced operators of drones.

The global condition might for example be drafted in consultation with State and Territory Governments to cover all correctional facilities, prisons, detention centres, drug treatment centres, residential psychiatric treatment centres and the like.

Similarly, coverage could also be extended to other State, Territory or Local government facilities which are sensitive or are critical infrastructure.

Finally, State and Territory noise regulations are not fit for purpose for regulating drone noise given, amongst other things, the requirement for the noise to be recorded and be so for a sustained period.

The regulatory framework ideally should also allow for Commonwealth enforcement (potentially on advice of States, Territories or local governments) and the application of restrictions or penalties for non-compliance where operator licensing conditions are breached.

Discussion

The ACT Government accepts that drone technology presents complexities and challenges for civil aviation regulation and for regulators in Australia. The most significant of these matters involve issues of safety, and the management of risks for other airspace users as well as people and property on the ground. The Civil Aviation Safety Authority acknowledged in their 2018 *Review of Aviation Safety Regulation of Remotely Piloted Aircraft Systems* that these critical considerations objectively, and in most instances exclusively, fall within the regulatory remit of the Commonwealth.

In July 2018, the Senate Standing Committee on Rural and Regional Affairs and Transport References Committee completed its inquiry into current and future regulatory requirements that affect the safe commercial and recreational use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems.

The Commonwealth Government tabled its response in November 2018 committing to further work in support of many of the recommendations. In its response, the Commonwealth indicated support for the development of a National policy for remotely piloted aircraft safety in Australia, and the establishment of appropriate coordination and implementation mechanisms with relevant departments and agencies to implement the policy and adopt relevant measures.

With those reports in mind, the ACT Government responds as following to the various suggestions in the Issues Paper:

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'There are good arguments for the [Air Navigation] Regulations to be amended to allow such noise to be regulated by State/Territory noise laws...'

State and Territory noise laws are not currently fit for purpose to regulate drone noise as the Commonwealth has exclusive power over aviation and national airspace. In addition, each set of State and Territory laws likely contain jurisdiction-specific nuances in how they are drafted and their legal application, which would create regulatory inefficiencies for drone manufacturers and operators if noise regulation were not done by the Commonwealth.

State and Territory regulatory frameworks have been constructed to deal with noise that is persistent and from a (largely) static source such as a lawnmower or tree stump grinder. This allows for accurate measurement and effective enforcement. Noise emissions from drones are intermittent and mobile, and as such, it is unclear how State and Territory regulatory frameworks would be applied or enforced.

Notwithstanding the challenges in regulating drone noise emissions, State, Territory and Local Governments are best placed to contribute to Commonwealth regulated operator licensing as it relates to community preferences on certain aspects of drone operations. This would be most efficiently done through a mechanism by which all licences are subject to a condition that the operator comply with local operating requirements, which may be varied from time to time and even episodically (for example during natural disasters or major events).

Australia would be much better served to have one system of regulation for navigable airspace whether the machine in question is essentially toy-like (for example a drone weighing 250 grams) or much larger. This is, for example, the approach that is taken with

other areas of technology regulation such as motor vehicle design and safety standards. Similarly, the design and noise emission characteristic standards of drones should be set on a national basis, but with local operating requirements also coming into play as a condition when operators are licenced.

Drone Vehicle noise emission standards

The ACT Government's view is that a national approach should be taken with regards to the vehicle standards of drones, including noise emission standards. A national approach would ensure clear and consistent rules for drone vehicle manufacturers in Australia and overseas, enabling the orderly development of this new technology. The Commonwealth may also wish to signal to industry that over time noise emission standards on drones would progressively become more restrictive in line with technological advances in the manufacture of quieter drones and to maintain amenity for Australians living in drone operating areas.

Operating rules

Operating rules that relate to a combination of safety and noise should be set as national rules. For example, these should cover airspace navigation standards including things such as minimum ground clearance during flight, as well as standard methods of payload delivery.

To allow the preferences of the local community to be taken into account when licensing drone operators, the ACT Government proposes that licenced drone operators be subject to local operating requirements set by the State and Territory Governments, and perhaps even Local Government, and incorporated into the licence for operators.

The ACT's drone delivery trial has highlighted the following areas of interest to local communities that State, Territory or Local Governments are best placed to provide input to the Commonwealth:

1. acceptable hours of operation for drones;
2. setting a limit on the number of overflights; and
3. prohibitions on overflight of sensitive areas. Current no-fly zones that apply to manned aircraft are not sufficiently broad enough to capture the range of sites that would ideally be prohibited from drone overflight. In the ACT, these include ACT correctional facilities, Embassies, High Commissions and other protected diplomatic offices and residences, and other sensitive Commonwealth and ACT Government facilities. Local operating requirements could set some of these prohibitions, although global ones in relation to correctional facilities and the like should be considered by CASA.

The ACT Government acknowledges that the potential benefits to economic growth, environmental green-house emission reduction, and timely supply of critical items in emergency or crisis situations warrant a balanced approach to the issue.

Enforcement

'States/Territories are arguably better placed [to] take compliance and enforcement action against people generating an unacceptable noise impact using established regimes not available to the Australian Government...'

The ACT is of the view that the Commonwealth is better placed to take enforcement action against people operating drones in a manner that is inconsistent with national rules and contrary to licence conditions.

Current Territory frameworks to monitor and enforce noise limits will not be fit for purpose in relation to drones given the requirement for evidence of the impact of the noise emission on the complainant.

A preferable model is to set noise emission standards on commercial drone vehicles, require registration to ensure that only drones that comply with those standards are in operation, and then set, monitor and enforce compliance with licence conditions.

Pages 8 and 13 of the issues paper

'Drone regulation by State and Territories might be more suited to certain aspects of drone delivery operations, e.g. noise around the sites where delivery products (e.g. food) are being prepared and where the products are actually delivered..'

'As with drones, there is scope for some application of States/Territories/Local Government regulations especially in terms of their base of operations being covered under State and Territory planning law..'

The ACT Government is optimistic about the potential benefits of drones and drone delivery services; from empowering local businesses to reach more customers, to cutting greenhouse gas emissions and making life easier for Canberrans living with mobility challenges. We are also interested in further exploring the wide range of situations and possible applications for drone technology, including in the context of Emergency Services.

The ACT Government notes that the Territory has been the launchpad for trials of ground-breaking services such as those provided by Wing, and that we have now had some experience observing their operations and the community's response.

The ACT Government notes that complaints about noise generated by Wing's drones are few and have lessened in number since Wing rolled out new technology earlier this year. Wing operates in accordance with CASA operating licensing conditions, with defined flight paths and limited hours of operation. Several complaints ostensibly about Wing operations have in fact been for drones owned by private recreational operators.

The view of the ACT Government remains that the Commonwealth remains best placed to implement a single regulatory regime for drone noise across Australia and national airspace, through both design standards and operator licensing conditions.

ACT Government position on proposed noise regulation of drones

The ACT Government has reviewed the proposals for noise regulation of drones put forward in the Discussion Paper and responds as follows:

Proposal	ACT Government Position
<p>Concentrating Commonwealth Noise Regulations on their air navigation and not their base of operations</p>	<p>Agreed in part.</p> <p>The ACT Government seeks to avoid regulation which would result in different operating and noise regimes for drones to be in place depending on where and how the drones operate. The ACT Government is in favour of a comprehensive Commonwealth regulatory scheme for navigable airspace and drone noise as logical extensions of the current arrangements for larger aircraft.</p> <p>It is not in the interests of business, the consumer or Government to have multiple overlapping schemes for airspace where State and Territory land boundaries have no relevance.</p> <p>The ACT Government does however suggest that State, Territory and local authorities should set local operating requirements, with compliance being included in operator licensing conditions. This mechanism would go to matters such as hours of operation and overflight.</p>
<p>Regulations not applying to recreational drones or those under 250 grams</p>	<p>Agreed, although local operating requirements would apply to all users whether licensed or not.</p>
<p>Regulations not applying to drones operating under standard operating conditions</p>	<p>Not agreed.</p> <p>The ACT Government supports a comprehensive Commonwealth regulatory scheme for navigable airspaces and drone noise as logical extensions of the current arrangements for larger aircraft. Compliance with standard operating conditions does not go to noise emissions by the drone other than obliquely by limiting the operator to not flying close to or over people. In addition, the ACT</p>

	Government understands that the Air Navigation (Aircraft Noise) Regulations apply to the machine, not the operator. If drones are not covered by the Regulations then it would theoretically be possible for a licensed operator to pilot a drone within the Standard Operating Conditions, yet generate a nuisance if, for example, they were using a particularly noisy drone.
Regulations not applying to particular operations including emergency services, agricultural and other prescribed services	Agreed
Drones that meet recognized international aircraft noise certification standards not requiring approval under the regulations	Agreed
Benchmarking acceptable noise levels for overflying different land use areas	Agreed
Allowing noise regulation of drones by State/Territory Governments where this is consistent with regulation of other types of noise	Not agreed for the reasons given above

ACT Government position on proposed noise regulation of Urban Air Mobility Aircraft

The ACT Government has reviewed the proposals for noise regulation of Urban Air Mobility Aircraft put forward in the Discussion Paper and has the following comments:

Proposal	ACT Government Position
National noise regulation for Urban Air Mobility aircraft (UAMs) using noise levels based on aircraft with similar propulsion	Agreed
Concentrating Commonwealth Noise Regulations on their air navigation and not their base of operations	<p>Agreed in part.</p> <p>The ACT Government is in favour of a comprehensive Commonwealth regulatory scheme as a logical extension of the current arrangements for regulating drone, UAM and aircraft noise, but with provision for local operating requirements set by State, Territory and perhaps Local Governments and specific to the local jurisdiction, which are incorporated in the licence and enforced by the Commonwealth.</p>
UAMs that meet recognized international aircraft noise certification standards not requiring approval under the regulations	Agreed
Allowing noise regulation of UAMs by State/Territory Governments where this is consistent with regulation of other types of noise	Not agreed for the reasons given above
Requiring Australian Noise Exposure Forecasts to be produced by the aircraft operator around landing and take-off sites	Agreed