



International Aerospace Law & Policy Group
Australia's Air & Space Lawyers

Aircraft Operations
Aviation Environment Branch
Department of Infrastructure, Transport, Cities and Regional Development
GPO Box 594
CANBERRA ACT 2601

21 November 2019

Dear Colleagues

Submission to Noise Review: The Case for a National Unified Traffic Management (UTM) Policy Framework to Precede Specific Noise Regulation

Thank you for the opportunity to make submissions on the present Review of Air Navigation (Aircraft Noise) Regulations 2018 – Remotely Piloted Aircraft (**Noise Review**).

Executive Summary

International Aerospace Law and Policy Group (**IALPG**)¹ welcomes the opportunity to assist the Department of Infrastructure, Cities, Transport and Regional Development (**DIRDC/Department**) to determine the appropriate scope and breadth of future noise

¹ IALPG is an international law firm specialising in aviation and space law with a view to strengthening safety for all air and space users. It brings together expertise in international aviation, space, drone and defence law and uses its diverse expertise in niche areas to achieve constructive and commercial solutions to time-sensitive legal problems, even in the context of national and global political sensitivities. It's founder, Joseph Wheeler, is one of the few qualified air law practitioners in Australia with a dedicated practice in air law. It is also the only law firm in Australia with a dedicated practice in space law – predominantly through Duncan Blake, a consultant with the firm. The firm provides legal and policy advice solutions, international and domestic representation, management of compensation and other claims, in the aviation and space industry contexts.



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regulations by urging it to address RPAS noise regulation through a national “Unified Traffic Management” policy framework.

This submission takes the following view of noise regulation with a specific focus on RPAS regulation in Australia:

1. Before tackling siloed efforts relating to RPAS noise regulations, the Australian Government should prioritise and complete an overarching policy framework for integrated airspace that encompasses all present and future users, such as civil aviation, RPAS and space (hereafter “Unified Traffic Management”, or “UTM”);
2. In order to effectively prioritise such an integrated policy framework, the Department should devote more resources towards allowing the necessary close consultation among federal agencies, industry, and state and local governments.
3. By developing a comprehensive UTM policy framework that encourages increased government resources being devoted towards an integrated airspace, Australia will be able to lead the Asia-Pacific region in developing its UTM framework and this will be achieved through clear and better collaboration among government agencies, including a multi-remit and dynamic type of regulatory oversight (i.e., not just safety-centric), with clear recognition of community and social interests that the system will be designed to cater for.

In short, while the proposal in the Issues Paper for noise regulations to advance to protect social and environmental interests in the short term is welcome, a better approach in our view would be to stage that implementation after further overarching policy work and consultative is explicated in the national policy framework for RPAS which has thematically linked many submissions to the RPAS Senate Inquiry, and featured in the Australian Government response to the Senate Committee’s recommendations thereafter. This would permit the regulations to be data driven and in line with Government expectations for future harmonious drone regulation.

Background

IALPG Submissions 2016

In December 2016, IALPG drafted submissions to the Senate Rural and Regional Affairs and Transport References Committee Inquiry on Statutory Requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems.

The submissions addressed CASA's legislative amendment to Part 101 of the Civil Aviation Safety Regulations 1998 (**CASR (Legislative Amendment)**), which was tabled in both Houses on 18 April 2016, and took effect from 29 September 2016.² The Legislative Amendment was designed to relax existing impediments of training and certification requirements for commercial drone operators RPAS weighing up to 2kg in weight. The amendment also sought to make it easier for property owners to use such aircraft up to 25 kg in weight without appropriate training and certification for private purposes, while essentially scaling back safeguards that had previously contributed to the notable safety record of commercial drone operations in Australia up to that point.

IALPG argued that while relying on the mitigation of risk through the imposition of standard operating conditions, the Legislative Amendment did not introduce necessary and sensible risk mitigation and enforcement measures uniformly recognised around the world to be necessary for the prevention of harm.³ As part of its submissions, IALPG submitted twelve (12) recommendations including a recommendation that encouraged the government to repeal the new Legislative Amendment. Recommendations addressed the utility of tracking drones using geo-fencing technology⁴ as well as emphasizing the need to promote both aeronautical and public education around the increasing usage and potential risks associated with RPAS.⁵

A further recommendation addressed the need for criminal sanctions to denounce the usage of RPAS contrary to the interests of national security and stressed the meaningful integration of councils in playing an active part to help regulate drone activity at the local level.⁶ This would help inform community members about the responsibility required to safely operate drones that have the potential for incidental contact with people, vehicles, wildlife or infrastructure. Additional considerations regarding the possibility of mandatory insurance for commercial drone operators like we have seen with the *Civil Aviation (Carrier's Liability) Act* scheme were also proposed.

The submissions concluded by insisting that the impending Legislative Amendment will bring about a deterioration in air safety as there were no age, training, experience, security or licensing restrictions on commercial drone operations for high powered drones less than 2kg, which can fly as high as 19,000 feet high and up to 72 km/hour⁷ despite the potential for drones to cause significant harm, if not catastrophic events.

² Joseph Wheeler, "Submission of International Aerospace Law & Policy group (IALPG) to the Senate Rural and regional affairs and Transport References Committee Inquiry on Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems," (December 2016) at p. 5.

³ *Ibid.*

⁴ *Ibid* at pg. 7.

⁵ *Ibid* at pg. 8.

⁵ *Ibid* at p. 9.

⁷ Technical specifications for a commonly available drone available online or from department stores in Australia (dji Phantom 4).

IALPG urged CASA to make the safety of air navigation its most important consideration rather than creating drone rules that were primarily designed to cut costs and reduce red tape.

Senate Inquiry 2017

On 28 June 2017, the Senate Committee heard evidence for its inquiry. At the hearing, witnesses including IALPG's Joseph Wheeler engaged in a question and answer period while expounding on the firm's 2016 submissions in greater detail.

Mr Wheeler urged the Committee to commit to a policy framework of integrated drone and manned aviation operations that ensures drone use will not degrade Australia's current enviable safety record stressing that Australia "needs to figure out what it stands for in this space."⁸

Mr Wheeler referred to the *Riga Declaration* made in the European Union in 2015 to inform the Committee that its goal was to establish rules based on harmonisation and creating a safe and sustainable integration of RPAS that gradually develops more stringent regulations or operational limitations for higher risk operations.

Secondly, Mr. Wheeler called for tighter enforcement mechanisms in order to prevent the breach of airspace, not solely through standard operating procedures and threatening fines but in a way where surveillance is combined with education, discipline and deterrence.⁹

Thirdly, he submitted that a "whole-of government approach"¹⁰ is required to address the multi-layered complexity that requires cohesion among all levels of government along with other industry stakeholders.

Mr. Wheeler finally urged the Committee to recommend that CASA prioritise the regulation of a drones stating that CASA part 101 does not appropriately prioritise the safe integration of unmanned aircraft systems safely or sustainably, and instead relaxes drone laws despite the pertinent threat of significant safety concerns, which is wholly inconsistent with the Government's key policy objective:

The Government considers the safety of passenger transport services as the first priority in airspace administration and CASA should respond quickly to emerging changes in risk levels for passenger transport operations. Airspace administration should also seek to deliver good safety outcomes to all aviation participants.¹¹

⁸ Mr Joseph Wheeler, International Aerospace Law & Policy Group, Committee Hansard, 28 June 2017, p. 30.

⁹ *Ibid.*

¹⁰ *Ibid* at pg. 26.

¹¹ McCormack, Michael, Minister for Infrastructure, Transport, and Regional Development, September 2018, *Australian Airspace Policy Statement 2018*, s.34.

Mr. Wheeler concluded his remarks by insisting that his views were based not only on the purpose and effect of drone laws but based on what message would be sent to drone operators, the community in Australia as well as the international aviation community. He informed the Committee that it was time to send a message that Australian laws should facilitate the safe and sustainable integration of drones into airspace once a proper policy determination is made to do so and is both defined and agreed upon.

Senate Report 2018

In July 2018, the Senate Committee tabled its report into the current and future regulatory requirements that impact on the safe commercial and recreational use of RPAS, Unmanned Aerial Systems and associated systems (**Senate Report**) stemming in part from the interactions with witnesses in the Senate Inquiry of 2017. The Senate Report referenced IALPG eight (8) times in relation to the views expressed at the Senate Inquiry regarding the advantages of geo-fencing technology¹², the governmental cohesion involved in rethinking a new policy framework for air safety, and effective RPAS enforcement strategies by way of promoting ‘information sharing’¹³ amongst relevant authorities.

Recommendation 8 in part was the result:

The committee recommends that the Department of Infrastructure, Regional Development and Cities, in collaboration with the Civil Aviation Safety Authority, develop a whole of government policy for remotely piloted aircraft safety in Australia, and establish appropriate coordination and implementation mechanisms with relevant departments and agencies to implement the policy.¹⁴

Australian Government Response 2018

In November 2018, the Australian Government tabled its response to the Senate Report. The Government agreed with many recommendations, several of which were first presented by IALPG, particularly those which called for a mandatory registration

¹² Australian Commonwealth (Senate), “Rural and Regional Affairs and Transport References Committee” Current and future regulatory requirements that impact on the safe commercial and recreational use of Remotely Piloted Aircraft Systems (RPAS), Unmanned Aerial Systems (UAS) and associated systems, July 2018 at 6.15 on pg. 80.

¹³ *Ibid* at 7.26 on pg. 96.

¹⁴ See

https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Drones/Report/b01.

requirement for RPAS weighing more than 250g¹⁵ as well as implementing a tiered educational program designed to promote the safe use of RPAS. The government also agreed in principle to a “whole of government” policy approach, which was put to address RPAS safety in Australia, and which establishes appropriate coordination and implementation mechanisms with relevant departments and agencies.

The Government also agreed in principle, as part of the “whole of government” approach, to implement a comprehensive research and data gathering regime. The Government agreed to create a nationally consistent enforcement regime for RPAS which would entail on-the-spot fines with infringements¹⁶ reported directly to CASA in keeping with enforcement-related recommendations made by IALPG.

From this summary of the impetus for more comprehensive drone laws in Australia, IALPG has been, and continues to be, dedicated to playing a significant role in promoting rules that adequately support air safety especially where existing laws have fallen short in appropriately prioritising the safe operation of airspace vehicles.

Continuing the policy discussion

On 29 August 2019, IALPG along with other important industry stakeholders, including but not limited to, ACUO, AFAP, Civil Air, and private corporate entities participated in the inaugural Unified Traffic Management Roundtable (**IUTMR**) in Canberra.

The group agreed to record its present views as high level principles on the needs and aims of future united and integrated airspace traffic management that would permit the Australian industry to grow, while simultaneously bringing great benefits for the community and businesses alike.

The principles represented the views of the group rather than any single entity, individual or agency, and instead reflected the values and objective and subjective needs that are presently needed to develop a responsive and safe airspace that permits all stakeholders whether RPAS, air transport, or space, to co-exist in harmony in order to maximise their operational goals in a safe and integrated environment.

The principles agreed to were expressed as follows:

¹⁵ Australian Government, Australian Government response to the Senate Standing Committee on Rural and Regional Affairs and Transport Report: Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems, at pg. 4.

¹⁶ *Ibid* at pg. 12.

**OUTCOMES & PRINCIPLES – INAUGURAL UNIFIED TRAFFIC MANAGEMENT
ROUNDTABLE (IUTMR)
28 August 2019, Canberra**

1. The Australian Government should:

- a. prioritise a policy framework for integrated airspace that encompasses all present and future users, ie aviation, RPAS and space (hereafter “Unified Traffic Management”, or “UTM”); and*
- b. should do so in recognition of the multitude of applications and increased efficiencies this would support for Australia’s community and social interests, as well as business.*

2. The Australian Government through the Department of Infrastructure, Cites, Transport and Regional Development should devote sufficient resources to allow the necessary close consultation among federal agencies, industry, and state and local governments, to develop the blueprint for staged implementation of such a framework noting the existing Government Policy Objectives set out in respect of RPAS and very high altitude aircraft in the Australian Airspace Policy Statement and the need to incorporate the relevant needs of the space industry into such planning.

3. Australia should lead the Asia-Pacific region in developing its UTM framework and this will be achieved through clear and better collaboration among government agencies, including a multi-remit and dynamic type of regulatory oversight (i.e., not just safety-centric), with clear recognition of community and social interests that the system will be designed to cater for.

The remainder of this submission should be viewed specifically as recommendations relating to all aspects of the sustainable future use of drones including in the context of UTM noting the continuing priority to establish a national UTM policy framework that supports such an integrated and sustainable and environmentally (and socially) friendly airspace that encompasses issues such as noise, and is reflective of the recently highlighted principles agreed to by a cross section of industry in Canberra in 2019.

RPAS Integration and Unmanned Traffic Management (UTM)

i) Before tackling siloed efforts relating to RPAS noise regulations, the Australian Government should prioritise a policy framework for integrated airspace that encompasses all present and future users such as aviation, RPAS and space.

As part of a trial in 2018, Australia followed the lead of both the USA and European Union in approving limited flights of RPAS to deliver products including pharmaceutical as well as food and beverage items to households in residential areas in the capital city

of Canberra.¹⁷ The trial resulted in meaningful community feedback, which included concerns about privacy, wildlife impact, security and particularly noise.¹⁸ There are currently no published standards to regulate noise regulation internationally as it relates to RPAS with the exception of a recent Commission Delegated Regulation (EU) 2019/945 in Europe¹⁹ and there are no current ICAO standards for noise regulations for RPAS.

Similarly, there are no current RPAS noise regulations in Australia noting that the abovementioned trial brought to the attention of the Department that the current aircraft noise regulations did not apply to numerous RPAS operations.²⁰ This presents an opportunity for the Australian Government to address noise regulation (even more significantly because aircraft noise regulations have typically been within the domain of national governments²¹) to create a flexible and encompassing framework that acknowledges the diverse mix of airspace users.

In July 2019, Wing, a subsidiary of Alphabet Inc., a company that designs technology for drone-based delivery of freight, launched a unique trial delivering fresh bread, hot coffee and food items directly to homes based in Logan, Queensland.²² Wing has indicated that it will be expanding its air delivery service upon conducting further consultation with members of the Logan community.

As evidenced above, there is increasing support for the usage of RPAS technology for innovative purposes and this reflects a need to regulate such advancements in a way that supports the harmonious interplay of all airspace users while leaving room so that such rules can adapt to the rapidly evolving sector.

Therefore, it is recommended that before applying specific regulations to noise in a siloed attempt to address noise relating only to RPAS, it is more effective to create a national UTM policy framework that can facilitate a suitable aerial infrastructure for noise regulation while permitting RPAS, civil and military aircraft, future hybrid aerospace vehicles and space objects to co-exist under the same legislative umbrella in recognition of the multitude of applications and increased efficiencies this would support for Australia's community and social interests, as well as business.

¹⁷ International Civil Aviation Organization (ICAO), "UAS Traffic Management" (Working Paper No. A40-WP/226, 2 August 2019) at 1.1.

¹⁸ *Ibid* at 1.4.

¹⁹ Commission Delegated Regulation (EU) 2019/945 of 12 March 2019 on unmanned aircraft systems and on third-country operators of unmanned aircraft systems.

²⁰ International Civil Aviation Organization (ICAO), "UAS Traffic Management" (Working Paper No. A40-WP/226, 2 August 2019) at 1.5.

²¹ *Ibid* at 3.3.

²² Wing Medium, "*Wing to Introduce Air Delivery in Queensland*" (online, 31 July 2019) <https://medium.com/wing-aviation/wing-to-introduce-air-delivery-in-queensland-b8a6c8347443>.

Close Consultation Among Key Industry Stakeholders

ii) The Department of Infrastructure, Cites, Transport and Regional Development should devote more resources to allow the necessary close consultation among federal agencies, industry, and state and local governments.

A holistic approach to UTM requires unprecedented cohesion amongst key stakeholders from various industry sectors to address RPAS noise regulation as well as other important issues such as national security, privacy, insurance and liability and the international implications of a having an ecosystem of air traffic.

There must be opportunities for state, federal and local levels of government to be consulted to inform the development of the overarching UTM policy framework and it is important that consultation is inclusive of the ideas of those who have a significant interest in a shared airspace such as the space industry. Anything less departs from the non-siloed approach recommended by the Senate Committee and carried through in the Australian Government's response to the RPAS Inquiry.

With the relatively recent inception of the Australian Space Agency and the emergence of UTM amongst US, European and Australian organisations such as NASA, CSIRO, Verizon, Google and Amazon,²³ it is critically important to develop the blueprint for staged implementation of such a framework, noting the existing Government Policy Objectives set out in respect of RPAS and very high-altitude aircraft in the Australian Airspace Policy Statement and the need to incorporate the relevant nascent needs of the space industry into such planning.

Pursuant to the Government Objectives found within the Australian Airspace Policy Statement, there will need to be increased consultation with industry stakeholders to consider the operation of RPAS and very high altitude aircraft²⁴ as well as moving Australia's airspace towards closer alignment with a developing ICAO system and adoption of proven international best practices.²⁵

Therefore, a UTM policy framework will be incomplete without adequate consideration of and consultation with Space industry stakeholders.

²³ Telstra, Submission 36, p. 4. NASA refers to the National Aeronautics and Space Administration in the United States. CSIRO refers to the Australian Commonwealth Scientific and Industrial Research Organisation.

²⁴ McCormack, Michael, Minister for Infrastructure, Transport, and Regional Development, *Australian Airspace Policy Statement 2018* (September 2018).

²⁵ Ibid, s.35.

Australia to lead the Asia-Pacific region in UTM Development

iii) By developing a comprehensive UTM Policy framework that encourages increased government resources being devoted towards an integrated airspace, Australia will be able to lead the Asia-Pacific region in developing its UTM framework and this will be achieved through clear and better collaboration among government agencies. including a multi-remit and dynamic type of regulatory oversight (i.e., not just safety-centric), with clear recognition of community and social interests that the system will be designed to cater for.

According to the International Air Transport Association (IATA), the Asia-Pacific region will contribute to more than half of the new air passengers between 2018 and 2037²⁶ making it the fastest growing geographic region globally and is forecasted to grow even more rapidly by the increasing number of passengers from countries like China, India, and Indonesia. The local aviation industry is currently challenged in terms of providing the infrastructure to keep ahead of demand to ensure Australia does not lose its share of this global phenomenon. This means that air traffic is heavy in this region and will warrant safety rules that support the integration of various air space users even more so in a region that is experiencing such heavy traffic with no slowdown in sight.

This represents an opportunity for Australia to lead the Asia-Pacific region by way of a UTM policy framework to proactively manage the increase in air traffic in a way that serves as an example of how neighbouring countries in the region should address rules concerning the suitable integration of all airspace users. If noise regulations are implemented within such a framework in Australia, this could assist numerous countries to adopt similar regulations making Australia not only a global leader in UTM but in RPAS noise regulation as well.

In particular we disagree that suburban noise intrusions should be considered best regulated at local level as argued in the Issues Paper in the absence of overarching national policy guidance that is cognisant of the future needs identified of the converging industries (low level aviation and UTM with space industry needs).

Conclusion

IALPG has played a significant role in advancing recommendations that have been subsequently adopted by the Australian Government in relation to RPAS regulation particularly with respect to the need for a properly harmonious and inclusive national policy framework for RPAS.

²⁶ IATA, "IATA Forecast Predicts 8.2 Billion Air Travelers in 2037" Press Release no.82, <https://www.iata.org/pressroom/pr/Pages/2018-10-24-02.aspx>, 28 October 2018.

With the advancement of the space industry in Australia, it is becoming increasingly clear that the skies will not only need to be safely regulated but also shared cohesively amongst all of its various users. A UTM policy framework will help start the process of creating a legislative policy foundation that will not only inspire increased government cohesion between all levels but will also naturally include comprehensive noise regulations that apply to a fully integrated airspace, which is the direction that aviation is headed.

Each aviation stakeholder and mode cannot be viewed in isolation – which is a form of thinking that the Issues Paper notably prolongs unnecessarily and unhelpfully.

However, more government resources must be allocated to the progression of UTM in order to strengthen Australia's position as a leader in UTM in the Asia-Pacific region specifically. Once implemented, UTM will instil public confidence in the innovation that comes with it while ensuring aviation safety standards are upheld to continually keep Australia's skies safe.

Yours faithfully,



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