

3 August 2022

The Manager
Spectrum Licensing Policy
Australian Communications and Media Authority
PO Box 13122 Law Courts
Melbourne Victoria 3000

By online submission

To The Manager,

DroneShield Limited ABN 26 608 915 859 ('DroneShield') Response to New arrangements for the banned equipment and exemptions framework – Consultation paper July 2022 ('Paper')

1. Introduction

- (a) DroneShield is an Australian publicly listed counter drone company with its head office in Sydney and a second team based in the United States.
- (b) Through our team of Australian based engineers, we offer customers off-the-shelf products and custom solutions designed to suit a variety of terrestrial, maritime, and airborne platforms. DroneShield is proudly exporting Australian capability to customers throughout the world and supporting Australia's defence, national security and other organisations to protect people, critical infrastructure, and vital assets.
- (c) DroneShield welcomes the opportunity to provide a comment on the Paper.
- (d) While DroneShield is generally supportive of the initiative of the Australian Communications and Media Authority ('ACMA') to review the scope and operation of the banned equipment and exemptions regime under the *Radiocommunications Act 1992* (Cth) ('Act'), we do not consider:
 - (i) amendment is required to the current scope of the *Radiocommunications (Prohibition of PMTS Jamming Devices) Declaration 2011* (Cth) ('Current PMTS Ban') or the *Radiocommunications (Prohibited Devices) (RNSS Jamming Devices) Declaration 2014* (Cth) ('Current RNSS Ban'); or
 - (ii) that it is in the interests of the counter drone industry to create a permanent ban on counter drone technology, which will be known as the Radiocommunications (RLAN and RPAS Jamming Equipment) Permanent Ban 2022 ('Proposed RPA Ban'), and instead submit that the industry may be adequately regulated through the introduction of a licensing system.
- (e) We provide more information as follows.

2. Permanent Bans on PMTS and RNSS Equipment

- (a) DroneShield acknowledges that the intention of this reform is to streamline the existing legislation in connection with equipment that affects radiocommunications equipment, however, by narrowing:
 - (i) the Current PMTS Ban; and
 - (ii) the Current RNSS Ban,as proposed respectively in the:

- (iii) Radiocommunications (PMTS Jamming Equipment) Permanent Ban 2022 (**Proposed PMTS Ban**); and
- (iv) Radiocommunications (RNSS Jamming Equipment) Permanent Ban 2022 (**Proposed RNSS Ban**),

the incentive for manufacturers, designers and importers to ensure that equipment will not have an adverse effect on radiocommunications dissipates, as equipment that is likely to cause substantial interference will no longer be prohibited by such bans.

- (b) For this reason, DroneShield submits that the current regime concerning PMTS and RNSS jamming equipment be maintained. This means that PMTS and RNSS jamming equipment will continue to be regulated in the following manner:
 - (i) a permanent ban will continue to apply to:
 - (A) PMTS jamming equipment that:
 - (1) is designed to have an adverse effect on radiocommunications; or
 - (2) would be likely substantially to interfere with, disrupt or disturb radiocommunications, and
 - (3) operates on one or more bands used for PMTS services¹; and
 - (B) RNSS jamming equipment that:
 - (1) is designed to have an adverse effect on the reception by RNSS receivers of RNSS radiocommunications; and
 - (2) would be likely substantially to interfere with, disrupt or disturb the reception by RNSS receivers of RNSS radiocommunications; and
 - (3) is not, or is not included or incorporated in, an RNSS repeater².
 - (ii) legitimate radiocommunications devices may be carved out from the application of the permanent bans as applicable as determined by ACMA (to the extent of ACMA's jurisdiction) and through submissions to ACMA from industry and radiocommunications spectrum users.
 - (iii) the exemption regimes under section 27 and section 302 of the Act will continue to be relied upon by those who seek exemption from the permanent ban on PMTS and RNSS jamming equipment.
- (c) In the alternative, on the understanding that the intention of this review is to address the unintended consequence of equipment that has an overall positive effect (for example an RNSS repeater) being banned by the Current PMTS Ban and Current RNSS Ban, then DroneShield respectfully suggests that the words "and adversely" be added to the respective definitions of PMTS jamming device and RNSS jamming device so that the bans relate to equipment that is "likely to substantially and adversely interfere with, disrupt or disturb" radiocommunications.

3. Permanent ban on RLAN and RPAS jamming equipment

- (a) While DroneShield agrees that there should be restriction on the mass consumer market acquiring and deploying equipment which is designed to jam Radio Local Area Network (**RLAN**) and remotely piloted aircrafts (**RPAs**), we consider that the proposed regulatory regime is unlikely to have any

¹ Radiocommunications (Prohibition of PMTS Jamming Devices) Declaration 2011 (Cth) s 4.

² Radiocommunications (Prohibited Device) (RNSS Jamming Devices) Declaration 2014 (Cth) s 3.

mechanism to allow certain types of organisations to possess, or operationally deploy counter drone equipment to, despite a legitimate requirement to do so.

- (b) The Paper proposes that the counter drone industry be regulated in the following way:
 - (i) there will be a general policy of denial of possession, testing, manufacturing, and operational use of counter drone technology pursuant to the Radiocommunications (RLAN and RPAS Jamming Equipment) Permanent Ban 2022 (**‘Proposed RPA Ban’**).
 - (ii) ACMA may make exemptions pursuant to section 27(2) of the Act for the benefit of those listed in section 27(1) of the Act concerning operation of the Proposed RPA Ban.
 - (iii) ACMA may make exemptions pursuant to section 302 of the Act to facilitate research and development by those in industry who are independent of the bodies listed in section 27(1) of the Act. This will not include authority to operationally deploy in an open-air environment.
- (c) ACMA proposes to make the Radiocommunications (Exemption – Remotely Piloted Aircraft Disruption) Determination 2022 (**‘Proposed RPA Disruption Exemption’**) (pursuant to its powers in section 27(2) of the Act). This exemption permits only police and contractors of police to operationally use counter drone equipment if, and only if, all circumstances listed in section 9 of the Proposed RPA Disruption Exemption are satisfied.
- (d) DroneShield considers that the introduction of the Proposed RPA Ban will likely be problematic for the following reasons:
 - (i) while ACMA may grant an exemption to operationally deploy counter drone equipment to the various organisations listed in section 27(1) of the Act pursuant to section 27(2) of the Act, ACMA will not have the jurisdiction to grant such an exemption to the following types of organisations (absent a relationship with a body listed in section 27(1) of the Act):
 - (A) organisations providing ongoing protection of critical infrastructure (including airports) absent involvement of Defence or law enforcement or an emergency situation;
 - (B) organisations responsible for the provision of security and public safety at major events;
 - (C) organisations responsible for the security and safety of VIPs; or
 - (D) those in industry researching and developing counter drone technology.
 - (ii) the introduction of the Proposed RPA Ban will not result in a simplification of the exemption regime. ACMA will instead be required to grant further exemptions to those organisations with a need to operationally deploy counter drone equipment. As an example, the *Radiocommunications (Exemption Corrective Services NSW) Determination 2021* (Cth) permits certain prisons to use PMTS jamming devices. If those prisons also have a requirement to use counter drone technology (with particular reference to the increased use of drones to carry payloads containing contraband and explosives into prisons), then a further exemption will be required to authorise prisons in connection with that activity.
- (e) DroneShield considers that the Proposed RPA Ban may stifle the development of Australian industry, and the legitimate use of counter RPA equipment by those with a genuine need for such equipment.
- (f) For this reason, DroneShield respectfully suggests that the Proposed RPA Ban is not implemented under the regime and instead be structured as a spectrum licensing matter for the following reasons:
 - (i) if the Proposed RPA Ban is implemented, ACMA will have no jurisdiction under section 302 of the Act to grant operational permissions to certain types of users.

- (ii) under the Proposed RPA Ban regime, ACMA will have no power to grant operational permissions to certain types of organisations absent a relationship (or partnership) with one of the organisations listed in section 27(1) of the Act.
- (iii) the intended target of counter drone equipment is drones used for nefarious purposes or in areas where they are not permitted to be flown (for example near airports). While it is acknowledged that there are general recreational and commercial applications for drones, this should be balanced against considerations such as, the use of drones in no-fly zones, use of unregistered drones, and use of drones for nefarious purposes.
- (iv) taking guidance from the US Federal Aviation Administration's Remote ID requirements,³ remote ID is being used for drones to act like a "digital license plate" as a means to ensure drone safety and security while in flight. Counter drone technology, such as the technology designed and manufactured by DroneShield, has the ability to detect the remote ID, and accordingly only target non-authorised drone activity.
- (v) there are differing types of counter drone technology which have differing effects on the radiocommunications spectrum, such as:
 - (A) entire band jamming technology; and
 - (B) selective jamming, where only the subject transmission is jammed.

The risks associated with each type of jamming differs, and accordingly the treatment of each type of technology should also differ. The operational range of the counter drone technology is also a relevant consideration in connection with the assessment of the risk factor. For example, most counter drone technology has a modest reach of between 500m and 2km.

- (i) a licensing system for counter drone equipment would likely overcome the jurisdictional limitations of ACMA to grant operational exemptions pursuant to section 27(2) and section 302 framework.

4. Exemptions

- (a) DroneShield fully supports the intention of ACMA to achieve simplification of this regulatory regime. DroneShield however respectfully submits that the proposed bans and accompanying exemptions are unlikely to:
 - (i) provide adequate flexibility for operational deployment of counter drone technology for those who have a legitimate requirement to use such equipment; or
 - (ii) create a lasting effect of a simplified regime, as organisations will now be required to seek an exemption to the Proposed RPA Ban, thereby increasing the requirement for ACMA to make certain legislative exemptions in response to such requests.
- (b) The practical effect of introducing the Proposed RPA Ban and accompanying exemptions is as follows:
 - (i) police and police contractors are the only organisations permitted to operationally deploy counter drone equipment on an ongoing basis pursuant to the Proposed RPA Disruption Exemption.
 - (ii) visiting dignitaries, and police and Defence involved in providing security detail to such dignitaries will be permitted to use electronic counter measures subject to the satisfaction of the conditions in section 8 of the proposed Radiocommunications (Exemption – Visiting

³ 'UAS Remote Identification', *Federal Aviation Administration* (Web page, 13 July 2022) <https://www.faa.gov/uas/getting_started/remote_id>.

Dignitaries) Determination 2022.

- (iii) the police force or its contractors will be permitted to deploy an electronic counter measure devices to protect against the detonation or use of improvised explosive devices subject to the existence one or more of the circumstances in section 9 of the proposed Radiocommunications (Exemption–Bomb Disposal Electronic Counter Measures) Determination 2022.
- (c) The position under the proposed regime means that not only possession and acquisition of counter drone technology will be generally prohibited without an exemption, it will likely be impossible for organisations not listed in section 27(1) of the Act to be granted an exemption to operationally deploy counter drone technology.
- (d) While section 302 provides industry with a limited exemption to research and develop counter drone technology, ACMA lacks the jurisdiction to grant operational testing exemptions to such bodies absent a relationship with one of the types of organisations listed in section 27(1) of the Act.
- (e) The process to apply for an exemption to perform open-air testing of radiocommunications jamming equipment pursuant to section 193 of the Act remains unclear. ACMA may like to consider including some additional information on this process in the guidance paper “Use of banned equipment under the Radiocommunications Act 1992 by law enforcement and related persons – Information for users and stakeholders” included at Attachment G to the Paper.

5. Conclusion

- (a) While DroneShield supports the intention to streamline the current regime under section 27 and section 302 of the Act:
 - (i) the proposed changes to the Current PMTS Ban and the Current RNSS Ban render the application of those bans too narrow; and
 - (ii) DroneShield respectfully does not consider that the Proposed RPA Ban is necessary, and a licensing system would adequately protect the rights of other spectrum users.

Please contact me using the below contact details should you have any questions about this submission or wish to discuss in further detail.

Kind Regards



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