SUBMISSION TO NATIONAL AVIATION POLICY ISSUES PAPER ON EMERGING AVIATION TECHNOLOGIES

Minderoo Tech & Policy Lab, UWA Law School

Contents

1 Executive Summary

This submission contends that the *National Aviation Policy Issues Paper on Emerging Aviation Technologies* ('*Issues Paper*')[6] sets out a proposed process for regulation and engagement on national drone policy that creates significant risks. Specifically, the proposed process centres and privileges industry's needs and sidelines the public's interests in regulation of the use of airspace. In particular, the *Issues Paper* proposes a regulatory process that has no clearly defined mechanisms for: (1) engaging local communities; (2) capturing existing Local Government regulations; (3) empowering communities to mediate competing interests through democratic mechanisms; or (4) utilising local knowledge to achieve effective regulatory outcomes.

Three main risks arise from these failures. First, to the extent that regulation in this area does not engage local communities and empower them to

mediate competing interests through democratic mechanisms, it is likely to suffer from a democratic deficit. This is likely to undermine community acceptance of regulated outcomes. Second, if regulation in this area does not utilise local knowledge, it is likely to be ineffective and risks perverse outcomes. This is a particular risk if regulation of drones is not well aligned with other local regulation aimed at addressing amenity, privacy, environmental and noise concerns. Third, if the proposed drone regulation does not effectively interface with existing and future Local Government regulation of drones, it is plausible that we will be left with a proliferation of overlapping regulatory regimes that undermine compliance and are simply not effective.

The overall position advanced by this submission is that these risks can be most effectively managed and mitigated by further, better and more direct engagement with local communities and Local Government Authorities. To that end, it makes the following seven recommendations responding to the proposed core principles of the National Emerging Aviation Technology (NEAT) Policy:

1. The Department undertake further and more extensive direct consultation over a meaningful time-period with:
   (a) local communities; and
   (b) Local Governments in their capacity as regulators.
2. The proposed unmanned traffic management (UTM) system be developed 'with appropriate technical advice and in collaboration with Local Governments and local communities' rather than 'in partnership with industry'.
3. Core Principle 2 'Encourage best practice operations' be replaced with 'Facilitate best practice operations'.
4. Core Principle 3 'Considerate of the community and the environment' be replaced with two core principles:
   (a) 'Empowering local communities'; and
   (b) 'Preserving our environment'.
5. Core Principle 6 'A nationally consistent approach' be replaced with 'A nationally co-ordinated, transparent and accessible approach'.
6. Reference to 'a market management approach that is ... [c]oordinated and free from unnecessary red tape' be replaced with 'coordinated and regulated by appropriate democratic mechanisms'.
7. Ensure that regulation of commercial and recreational drone usage be undertaken by the local communities impacted by those operations. To give practical effect to this principle:
   (a) By default, commercial and recreational drone operation be prohibited unless permitted;

(b) Flight paths permitting drones to transit Local Government areas where their operations are otherwise prohibited be identified; and

(c) Drone operation by emergency or health services, law enforcement, regulatory bodies or for other public purposes be regulated by the jurisdiction which provides those services, which in most cases will be State or Territory Governments.

Adopting these recommendations will help to ensure a democratically controlled regulatory regime which is more likely to be streamlined, efficient, effective and, most importantly, accepted by local communities. This is a solution that serves the long-term interest of both communities and technological development. Demanding that innovation proceed in a principled and well-governed manner is not to stop it; it is to save it.

2 Who We Are – The Minderoo Tech & Policy Lab

The Minderoo Tech & Policy Lab is a research institute headquartered at The University of Western Australia. The Lab is directed by legal scholar Associate Professor Julia Powles and technologist Associate Professor Jacqueline Alderson, who lead an interdisciplinary team of researchers that specialise in the development and regulation of emerging technologies. This submission was led by Research Fellow Tomas Fitzgerald.

The Lab commenced operations in September 2020 as a core node in an international tech impact network focused on tackling lawlessness in the technology ecosystem, with partners including the University of Cambridge, the University of California Los Angeles, New York University, the University of Oxford, the Australian National University, the University of Sydney, and more.

The Lab pursues twin objectives: promoting and protecting rights for individuals and communities faced with the harmful consequences of digital technologies and data-informed systems; and providing a robust pro-innovation environment and use-cases for the stimulation of civic tech development in the public interest.

The Lab acknowledges the support of Australian charity Minderoo Foundation in the creation of the Lab. We maintain the highest standards of academic integrity and are committed to the autonomy and independence of our researchers to pursue work free of external influence.

3 Local Communities and Regulation of Technology

3.1 Shortcomings of an Industry-Orientation

The *Issues Paper* makes clear that the focus of the exercise is to provide for the needs of industry, rather than that of local communities. The executive summary explains,

> Noting the potential economic and social benefits, *the rationale for a national policy is to provide certainty for industry investment and provide a clear policy and legal framework that actively encourages and facilitates the use of this technology.* (Our emphasis)

The public's interest is reduced to a mere afterthought, tacked on to the central purpose of providing for the needs of industry; '[h]owever, the policy and legal framework will also include a range of measures to *mitigate potential risks and impacts on the community.*' (Our emphasis)

Nowhere does the *Issues Paper* consider explicitly whether the acknowledged risks and impacts of drones might outweigh the potential, inherently speculative, benefits. Nor does it consider the more fundamental democratic question: whether the public wishes to make a trade-off between those potential benefits and the risks and impacts.

It has become commonplace to observe that the public is losing faith in democratic institutions. A critic might reasonably suggest that it would be very odd for the public to maintain faith in institutions who consider them an afterthought to be managed when seeking to provide for the needs of industry.

In the context of emerging aviation technologies, the central risk is that by failing to genuinely engage with the public's views, preferences, values and desires when proposing a regulatory framework, any regulation that is ultimately formulated will not have widespread support. In the absence of widespread support for the regulatory approach, industries that seek to use emerging aviation technologies are likely to lack a social licence to operate. Without genuine engagement and buy-in – in other words, without democratic participation in formulating the regulations – industry is unlikely to achieve the certainty and encouragement that it seeks from regulation.

On the contrary, the public has already demonstrated a willingness to take active countermeasures against drone incursion.[8, 5, 12] A recent YouTube video of a drone-enabled burrito delivery by Wing Aviation LLC, a subsidiary of Google/Alphabet Inc., in Australia attracted the telling comment,

> The noise will drive you crazy. The burrito was overpriced. This is just a bad idea. I live in Melbourne Australia, the last thing I want to hear is drones going day and night would drive you mad. Time to bring out the slingshot blow those little mothersis[sic] out of the sky....lol[4]

Similar sentiments are echoed whenever stories of drone delivery appear on social media. It would be tempting to dismiss these as internet-enabled braggadocio. However, these comments speak – albeit crudely – to the tensions at play. Indeed, the Civil Aviation Safety Authority's (CASA) website on 'Enforcement and Penalties' relating to drone operation sees fit to clarify that '[i]t's also illegal to shoot down or interfere with a drone, even if it's flying over your home or backyard.'[2]

For these reasons, this submission recommends the Department undertake further and more extensive direct consultation over a meaningful time-period with local communities. The need for regulation in this area is not so pressing that a time frame of between one and two months to provide feedback on this *Issues Paper* is warranted. Taking the time to engage in further and more extensive consultation with the public will also permit the Department to engage more directly with local regulators.

3.2 Confidential Submissions

One concrete improvement to the engagement process which the Department could undertake is to review the appropriateness of permitting industry to make confidential submissions in response to this *Issues Paper*. A full 25 percent of the 92 responses to the recent *Report on the Review of the Air Navigation (Aircraft Noise) Regulations 2018 – Remotely Piloted Aircraft & Specialised Aircraft* ('*Noise Report*')[16] were listed as 'CONFIDENTIAL'. This poses a considerable challenge for community members who are seeking to engage with the process, as they are not able to read and respond to the content of confidential submissions. Moreover, it is not clear why confidential – as opposed to anonymised – submissions are desirable in this instance, particularly from industry.

4 Who Should Regulate Amenity, Privacy and Noise Issues?

4.1 Local Governments

The *Issues Paper* notes that '[p]rocesses will be settled to provide clear, transparent and proportionate avenues to address community concerns, such as those relating to safety, privacy and noise.' It is not clear what those processes will be. Additionally, it is not clear what is meant by a 'proportionate avenue' to address community concerns.

Further, the *Issues Paper* asserts a need for 'coordination of regulatory requirements across different issues and jurisdictions (Commonwealth and State/ Territory), to prevent duplication or inconsistency in regulatory regimes.' However, it does not make clear what duplication or inconsistency is being targeted, nor why inconsistency *per se* is a problem. For example, it is highly likely that rural communities and dense urban communities will have different preferences and considerations which will require balancing when drone use is regulated.

There seems to be no reason in principle that rural and urban communities adopting different – and hence 'inconsistent' – regulatory regimes is a problem. If the goal is to avoid regulatory regimes that are incompatible, rather than merely inconsistent, then this terminology should be adopted.

The *Issues Paper* appears to assume that there will be no role for Local Governments to regulate drone functions. Indeed, Local Governments are mentioned only twice in the *Issues Paper* – on pages 18 and 51. The main reference to Local Governments is in relation to an undertaking to 'work with industry to better understand the impact of drone and eVTOL operations on infrastructure', and 'with planning agencies and local government to support the evolving requirements, including pathways for approval.'

However, Local Governments are already regulating drone operations within their jurisdictions.[15, 14, 7] As Local Governments are the first port of call for amenity, privacy and noise regulation, this trend is likely to continue. Indeed, amenity, privacy and noise impacts are regulated by Local Governments precisely because their direct connection with, and detailed knowledge of, local communities makes them the most appropriate regulatory body. The same considerations speak to the appropriateness of Local Governments taking a lead role in regulating these concerns in relation to drones. The inverse is also true; the Commonwealth's distance from, and relatively coarse knowledge of, local communities would make them a plainly inappropriate regulatory body for addressing amenity, privacy and noise impacts.

4.2 Constitutional Challenges

Until recently, much of the legal analysis of drone regulation by Local Governments had suggested that by-laws purporting to regulate drone usage could be invalid by reason of s109 of the *Australian Constitution.*[9] However, the High Court's judgement in *Work Health Authority v Outback Ballooning Pty Ltd & Anor* [2019] HCA 2 clarified that the Commonwealth's legislative framework for civil aviation – comprising the *Civil Aviation Act 1988* (Cth) and related regulations – was not structured in such a manner as to give rise to an intention to 'cover the field'. Consequently, the court found that there was scope for the application of concurrent legislation. That case dealt with the concurrent operation of the Northern Territory's *Work Health and Safety (National Uniform Legislation) Act 2011* (NT). However, the finding's central point can be generalised. That is, it would preclude any argument that in its present form the Commonwealth's legislative framework is exhaustive, and therefore excludes the operation of other State and Local laws relating to aircraft operations.

In sum, State and Local Laws which seek to regulate the impact of drone usage will not be precluded by operation of s109 of the *Australian Constitution.* Hence, the possibility – indeed likelihood – of overlapping regulatory regimes remains. While the Commonwealth might seek to undertake legislative reform in order to more comprehensively regulate drone usage, such an approach would carry its own constitutional challenges. Specifically, there is no single, clear constitutional head of power which might underpin such Commonwealth legislation.

Rather, it is likely that the Commonwealth would have to rely on a patchwork of existing powers – such as the corporations power, the trade and commerce power, the telecommunications power, etc. Leveraging those discrete powers to support a comprehensive legislative framework to regulate issues including environmental, amenity, privacy and noise risks arising from drone usage would be a challenging proposition. The risks mirror those flagged by Professor Greg Craven, who infamously described the possibility of Commonwealth intervention to comprehensively regulate water policy in the following terms:

> Their problem would be that I suspect they wouldn't have enough power to achieve coverage. In other words, they could intrude in and dominate, but they wouldn't be able to take over absolutely everything. And the result would be a sort of constitutional Afghanistan, where you held the fertile valleys and you head for the hilltops, but everywhere there were little things that were immensely difficult to control. So I think you'd end up at the end of the day with a regulatory patchwork between the Commonwealth and the states, which was even more complex and problematic than the thing it was meant to improve.[1]

Any Commonwealth attempt at comprehensive regulation carries significant legal uncertainty that will require final determination by the High Court in expensive and time-consuming constitutional litigation. Given the shape of the drone market, that litigation would also embroil prominent international corporate entities who are notoriously averse to reputational and regulatory risk. In that way, relying on comprehensive Commonwealth legislation to regulate drones is likely to be counter-productive to the market-building objectives of the NEAT Policy.

How, then, to square the circle?

This submission contends that rather than recommending that the Commonwealth seek to exert regulatory control over the entire field of issues raised by the operation of drones, it is preferable to use the Commonwealth's capacity to coordinate the regulatory positions of all jurisdictions. The Commonwealth could use the 'proposed system of traffic management for unmanned and autonomous aircraft (UTM)', which 'will include a single centralised Government platform (a flight information management system (FIMS)) to facilitate access to authoritative national government data' to also register and communicate relevant regulations passed by Local, as well as State and Territory Governments. The Commonwealth can provide a clear, coherent and transparent communications framework to effectively transmit the content of regulation set by other jurisdictions. By providing a mechanism to integrate State, Territory and Local laws with the FIMS, the Commonwealth is likely to achieve its goal of a 'co-ordinated and consistent' approach to regulatory responses.

This is also likely to avoid the significant practical challenges which would arise from an attempt to regulate at a Commonwealth level. That is, the distance from the local issue and the complex regulatory environment is likely

to make responding effectively to local concerns very difficult in practice. As McIntrye & McIntyre noted in a submission to the Noise Regulation Review for Remotely Piloted Aircraft (RPA) and Specialised Aircraft,[3] these practical challenges did in fact arise,

> – Various ACT Government elements receiving the phonecalls tried to pass the complainants across to CASA. This was naive and completely unhelpful, as CASA has no responsibility under its charter, Regulations and Orders for aircraft noise. When the CAA split into the current two regulatory arms, CASA and ASA, all aircraft noise control matters became the responsibility of ASA.
> – If CASA was contacted directly, then complainants were told to contact ASA. This was the correct response from CASA.
> – When complainants contacted ASA, they were invariably subjected to operator delays and further connections, as the staff involved often seemed to be unsure as to how complaints should be processed. Some were told to (incorrectly) contact CASA, or to contact the Department of Infrastructure, Regional Development and Cities. (Which includes the Transport policy arm). The majority were told that drones (also referred to as remotely piloted aircraft, or RPAs) were not subject to noise control by ASA or government bodies.[13]

In concrete terms solving these practical challenges, and crafting the most effective legislative response, will require engaging with Local Government as regulators in a manner which is not presently contemplated in the *Issues Paper*. Hence, point 1(b) of this submission's first recommendation, that:

1. The Department undertake further and more extensive direct consultation over a meaningful time-period with ...

   (b) Local Governments in their capacity as regulators.

Additionally, these submissions make a second recommendation, that:

2. The proposed unmanned traffic management (UTM) system be developed 'with appropriate technical advice and in collaboration with Local Governments and local communities' rather than 'in partnership with industry'.

Finally, for the reasons outlined above, the preference for a nationally coordinated, rather than a 'nationally consistent' approach can be reflected by amending Core Principle 6, in line with our fifth recommendation:

5. Core Principle 6 'A nationally consistent approach' be replaced with 'a nationally co-ordinated, transparent and accessible approach'.

5 Revisions to Proposed 'Core Principles'

The foregoing analysis suggested that the *Issues Paper* failed to identify precisely how it would engage with the local communities who will bear the impact of the widespread introduction of commercial and recreational drone operations. It suggested that the Department should articulate concrete mechanisms for undertaking such engagement. It also suggested that the legal risks which will attend any attempt to take a comprehensive regulatory approach at the Commonwealth level were best addressed by instead adopting an approach that co-ordinates the various regulatory responses from other jurisdictions in a streamlined way.

In essence, those recommendations suggest that local communities and regulators should be the central, rather than the peripheral focus of the Department's strategy for addressing the issues raised by the emerging technologies in this space. With that essential purpose in mind, it is worth revisiting the proposed 'core principles'.

5.1 Core Principle 2 – 'Facilitate' Best Practice

The first core principle which is proposed to underpin a National Emerging Aviation Technology (NEAT) Policy, '[t]he necessity for safe and secure operations', is appropriate. The present regulatory framework administered by CASA takes air traffic safety as its central and overarching principle. It follows that any government policy seeking to guide regulation in this area should do likewise.

The second core principle is 'encourage best practice operations'. It is here that the conceptual challenges begin.

Taken on its face, the second core principle suggests that underpinning the NEAT Policy is a desire to encourage, but not mandate, best practice operations. Already, this raises the spectre of incoherence; presumably the NEAT Policy will enforce, not merely encourage, best practice safety standards. As this is plainly the expectation of the first core principle, the only coherent way to read the second core principle is that in areas other than safety and security – in which best practice operations will be mandatory – the Policy will merely encourage best practice operations. Put another way, Core Principle 2 implies that operations which are not best practice will be merely 'discouraged'.

It seems very odd that a policy statement intended to 'form the basis of any legislative, regulatory or functional change as necessary, settle roles and responsibilities within government, and guide action plans for the development of processes and procedures' would set out such a self-consciously low standard.

Presumably other stakeholders would much prefer that industry meet mandated best practice operations, rather than merely being encouraged to do so. As presently formulated, core principle 2 enshrines that sub-optimal practices as regards amenity, privacy, environmental and noise impacts will be tolerated. This seems plainly objectionable.

Presumably it is the Department's intention to facilitate, rather than merely 'encourage' best practice operations. Hence, this submission's recommendation that:

> 3. Core Principle 2 'Encourage best practice operations' be replaced with 'Facilitate best practice operations'.

5.2 Core Principle 3 – 'Empower' Communities

The third core principle proposed to underpin the NEAT Policy is '[c]onsiderate of the community and the environment'. Again, on its face, this is unclear. The *Issues Paper* does not clarify what will constitute consideration, nor how the requirement to be 'considerate' will interface with other competing obligations or goals. Further, the notion of a policy designed to ensure persons and corporations undertaking a risky activity are merely 'considerate' of key stakeholders has few precedents. Regulators would not ordinarily instruct, say, vendors operating food businesses to be 'considerate' of health standards.

As well as being indeterminate, enshrining mere consideration as a 'core principle' of the NEAT Policy evidences an intention to privilege corporate over public interests. It means that the stated core strategy underpinning the NEAT Policy is to 'support' industry growth and development, but merely to 'consider' impacts that industry might have on the community or the environment. This seems plainly undesirable.

We can take as given that community and environmental values are at least as important as industry's preferences. It follows that the core principles of the NEAT Policy should treat community and environmental interests in the same way that it treats industry's interests. That is, at the minimum, communities ought to be supported to achieve their desired outcomes.

The strategy outlined above is to permit local communities to determine the appropriate regulatory settings for commercial and recreational drone operations by means of local laws. In order to provide certainty, ease of use and encourage compliance with the regulatory regime, it is appropriate to use the technical mechanisms of the UTM to capture and disseminate the local regulations to commercial and recreational drone operators.

Hence recommendation 4(a) of these submissions:

4. Core Principle 3 'Considerate of the community ...' be replaced with ...

   (a) 'Empowering local communities' ...

5.2.1 Default Drone Permissions – Prohibited If Not Permitted

If we take the position that local communities should be empowered to regulate the use of drones for commercial and recreational purposes, the question then arises as to the appropriate default settings for such regulation. That is, what should the rules on commercial and recreational drone use be in the absence of any regulation set down by State or Local Government? This submission contends that the appropriate default setting should be 'prohibited if not permitted'. That is, in the absence of enabling regulation, commercial and recreational use of drones ought not to be unrestricted by default. Rather, communities ought to make a deliberate determination to permit those operations. Any reasonable interpretation on the fifth core principle's requirement for a 'fair, competitive and efficient approach to airspace access' would also enable the option to *reject* filling airspace with emerging aviation technologies. Such an approach will give regulation the best chance of broad community acceptance, and hence avoid the dangers inherent in a regulatory approach which is not broadly accepted.

The reason for this is best understood in the context of the purpose of regulatory intervention. To illustrate, the *Issues Paper* notes that,

> [t]he willingness of the public to accept an inconvenience is often linked to their understanding of its purpose. This is easily illustrated by the public acceptance of helicopter noise near a trauma hospital, when in other settings it may trigger complaints.

The force of the example used here is undeniable, but the reasoning is suspect. Public acceptance of the noise generated by a helicopter at a trauma hospital is not a product of mere 'understanding of its purpose.' Rather it is a product of a reasoned acceptance of a particular balance struck between competing interests. To be clear, the public might well *understand* that drone noise is an inevitable consequence of more widespread commercial drone operations but not *accept* that the benefit of those operations is an appropriate trade-off for the impact on local amenity. By contrast, the benefits of a helicopter operating at a trauma hospital are significant, and compassion for those in need of such emergency medical treatment supplies a compelling reason for accepting the attendant inconvenience. However, changing the purpose for which the helicopter operates changes the likelihood of community acceptance. One might reasonably assume that the public would be far less tolerant of the same helicopter noise if the purpose of the operation was to transport pizza, rather than trauma patients.

This point is not mere pedantry. Rather, it speaks to the core issue at stake. Much of the *Issues Paper* proceeds on the assumption that the public is to be managed, or considered when implementing a policy aimed at facilitating industry. The key difficulty here is the failure to recognise that in well-functioning democratic systems it is the *public* who regulates – through their elected representatives. This failure seems to be the core reason why the *Issues Paper* does not consider regulation as the means by which democratic societies strike a balance between competing values and preferences.

This failure sounds in the *Issues Paper's* reference to 'a market management mechanism that is ... free from unnecessary red tape'. It is not clear what is meant by 'red tape', nor how policy makers will determine whether such 'red tape' is 'necessary' or not. Reasonable opinions might differ as to the necessity of particular regulations. Presumably the best mechanism for determining which of a number of reasonable competing claims about the preferable extent of regulation ought to be adopted is the democratic process. The alternative is to suggest that policy makers ought to be able to make undemocratic determinations as to the preferable outcomes to adopt. Plainly this conclusion would be indefensible in a democratic society.

It follows from this that an attempt to distinguish desirable from 'undesirable' regulation other than by democratic mechanisms is incoherent and objectionable. Consequently, this submission makes the recommendation that:

6. Reference to 'a market management approach that is ... [c]oordinated and free from unnecessary red tape' be replaced with 'a management approach that is coordinated and regulated by appropriate democratic mechanisms'.

Further, this submission recommends that:

7. (b) By default, commercial and recreational drone operation be prohibited unless permitted.

The specific reference to commercial and recreational drone use is intentional. It is accepted that drone use in other contexts – for example by law enforcement, regulatory bodies, emergency and health services – is governed by other considerations. It is appropriate that regulation of drone use for those purposes be undertaken by the levels of government responsible for the provision of those services. In most cases this will be the State and Territory governments. It ought to be the responsibility of State and Territory governments to supply the default provisions for drone use for the purpose of the provision of state services across their jurisdiction.

5.2.2 Provisions for Transiting Through Local Governments

Finally, a focus on regulation of commercial and recreational drone usage at the level of local communities would be ineffective if those regulations could be undermined by determinations made by other communities. In concrete terms, consider the situation of a local government effectively land-locked by others. The LGA of Burwood Council in NSW is bordered by the City of Canada Bay to the north, the Municipality of Strathfeild to the east, Canterbury-Bankstown to the south and Inner West to the west.[10] In a situation where all four councils determined to maintain a prohibition on commercial drone operations, there would be a de facto prohibition on drone operations between Burwood Council and any other LGA, regardless of the views of the local community in Burwood. Plainly this would defeat the intention of permitting local communities to make determinations as to drone use in their local area.

To remedy this situation, it is recommended that alongside a default 'prohibited unless permitted' setting for unregulated areas, designated 'transit through' flight paths be identified which would permit drones entering from outside a local government area to transit airspace to another. This will ensure certainty for commercial drone operators and preserve the principle that commercial and recreational drone regulation should be within the effective control of local communities – both in terms of restriction and permission.

Consequently, this submission makes the recommendation that:

7. Ensure that regulation of commercial and recreational drone usage be undertaken by the local communities impacted by those operations. To give practical effect to this principle:
   (a) By default, commercial and recreational drone operation be prohibited unless permitted;
   (b) Flight paths permitting drones to transit Local Government areas where their operations are otherwise prohibited be identified; and
   (c) Drone operation by emergency or health services, law enforcement, regulatory bodies or for other public purposes be regulated by the jurisdiction which provides those services, which in most cases will be State or Territory Governments.

5.3 Core Principle 3 – 'Preserving' Our Environment

The second part of proposed core principle 3 enshrines consideration of the environment as an underpinning value of the NEAT Policy. Much of the criticism of the notion of consideration outlined above applies equally here. It is not clear what is meant by consideration, how consideration will be given, nor why it is preferable to be 'considerate' of the environment, rather than some other

requirement. For example, it would be open to policy makers to enshrine environmental protection in the same way that the core principles enshrine safety – as a necessary and primary consideration. To be sure, there might be rational reasons for preferring the primacy of safety rather than environmental considerations. However, these reasons are not articulated.

Even assuming that there are good reasons to preference safety over environmental considerations, it does not follow that those same reasons support a preference for economic or social considerations to trump environmental. To be clear, this is a necessary corollary of the core principles as written. That is, they preference 'supporting industry growth and investment' and require only that operators are 'considerate' of environmental impacts. Absent a clear democratic mandate for such a preference, this submission contends that it should not be assumed.

The issue of environmental impact also illustrates the force of this submission's earlier argument that unless Local Governments have a direct hand in the regulation of drone use within their jurisdiction, the regulatory regime risks perverse outcomes. Local Governments frequently take steps to minimise and mitigate the impact of human encroachment on the environment. Those steps are cognisant of the need to maximise community acceptance of the regulations, and hence ensure broad compliance with those regulations. Absent broad compliance regulations will not achieve their intended effect. The need to maximise community acceptance often sounds in nuanced regulatory action designed to minimise inconvenience. Take, for example, the practice of local governments using signage to prohibit access to very specific areas which are used by nesting migratory species at particular times of year.[18] It is not uncommon for local laws to contain provisions which make it an offence to contravene the conditions imposed by such a sign.[1]

A policy framework which left a Local Government unable to effectively mirror their capacity to restrict physical access by signage with a capacity to restrict drone access would engender perverse results. It would prevent regulation from achieving the desired environmental outcomes – endangered migratory shorebirds are equally disturbed by drones as by people. Equally, imposing an arbitrary distinction between physical and drone access is likely to undermine existing support for such regulations.

Beyond broader environmental concerns, even domesticated animals can be significantly impacted by drone noise, as the ACT Equestrian Association's submission to the notes.[17] This reinforces the practical challenge facing regulation attempted other than at a local level. If the Commonwealth takes direct control of such regulation it would mean, in practice, that complaints about noise caused by a delivery drone would be beyond the jurisdiction of Local Governments, but complaints about a dog barking at a delivery drone would be within their scope. The possibility that this could result in perverse outcomes is obvious.

Ultimately, the *Issues Paper* presents no compelling rationale for accepting

[1] For one illustrative example, see s4.8 of the City of Melville's *Local Government Property Local Law 2010*.[11]

environmental degradation as a necessary and unavoidable consequence of drone operations. There is no attempt to articulate why the prospective economic and social benefits of drone operations justify permitting environmental degradation. Nor is there an attempt to quantify the scope of environmental impact in a manner that would permit intelligent determination of whether that impact is outweighed by the possible benefits.

In the absence of compelling reasons, there is no justification for regulatory or policy settings which assume that negative environmental impacts ought to be tolerated. Unless and until compelling reasons are supplied, they should not be. Consequently, the core principle which should inform the NEAT Policy is that in the absence of good reasons, regulation should require that the environment should be preserved in its present state, rather than degraded. Mere consideration of environmental impacts is not enough. Those impacts should be avoided.

In order to address these issues, this submission makes the recommendation 4(b):

> 4. Core principle 3 'Considerate of ... the environment' be replaced with ...
>
> (b) 'Preserving our environment' ...

6 Conclusion

This submission has made seven recommendations aimed at ensuring the regulation of drone use in Australia is clear, coherent, effective and democratically controlled. The central recommendation is that regulation of commercial and recreational drone use should be undertaken by the communities impacted by that use. Consequently, the submission has contended that there should be more consultation with local communities and Local Governments as regulators. Further, the submission has argued that the appropriate role for the Commonwealth is to undertake co-ordination of the technical aspects of the regulatory framework required to ensure that regulation undertaken at a local level is recorded and communicated to drone operators in a clear and consistent manner. It has argued that use of drones by public officials – for health, law enforcement, regulatory compliance or other public purposes – should be regulated by the States and Territories. These recommendations seek to enshrine the principle of subsidiarity; that wherever possible, regulation should be undertaken by the community impacted.

The emergence and more widespread adoption of drone technology attends significant risks. However, it also promises considerable benefits. Realising those benefits will require a regulatory regime which has significant support within the community. Industry has made clear that it is centrally concerned to have a regulatory framework which permits certainty. Regulation which lacks broad

community support – which is imposed on local communities from above, with little regard for their preferences – will not provide certainty.

It is hoped that the recommendations contained in this submission will assist the Department in formulating a set of core principles and approaches which enshrine an approach to policy formation which privileges local communities and gives them democratic control of regulations. Such an approach is far more likely to engender broad-based community support for regulations. Consequently, it is more likely to deliver industry the certainty it requires, and hence to deliver on the benefits broader adoption of these technologies offer.

7 Recommendations

1. The Department undertake further and more extensive direct consultation over a meaningful time-period with:
   (a) local communities; and
   (b) Local Governments in their capacity as regulators.
2. The proposed unmanned traffic management (UTM) system be developed 'with appropriate technical advice and in collaboration with Local Governments and local communities' rather than 'in partnership with industry'.
3. Core Principle 2 'Encourage best practice operations' be replaced with 'Facilitate best practice operations'.
4. Core Principle 3 'Considerate of the community and the environment' be replaced with two core principles:
   (a) 'Empowering local communities'; and
   (b) 'Preserving our environment'.
5. Core Principle 6 'A nationally consistent approach' be replaced with 'A nationally co-ordinated, transparent and accessible approach'.
6. Reference to 'a market management approach that is ... [c]oordinated and free from unnecessary red tape' be replaced with 'coordinated and regulated by appropriate democratic mechanisms'.
7. Ensure that regulation of commercial and recreational drone usage be undertaken by the local communities impacted by those operations. To give practical effect to this principle:
   (a) By default, commercial and recreational drone operation be prohibited unless permitted;
   (b) Flight paths permitting drones to transit Local Government areas where their operations are otherwise prohibited be identified; and
   (c) Drone operation by emergency or health services, law enforcement, regulatory bodies or for other public purposes be regulated by the jurisdiction which provides those services, which in most cases will be State or Territory Governments.

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