

Submission 78 – Tim Hollo

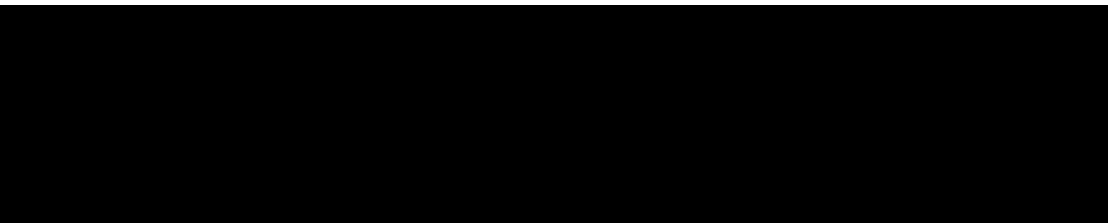
Submission to the Inquiry into Delivery Drones

Commonwealth Department of Infrastructure

Submission from:

Tim Hollo

Personal y



1. Introductory remarks

Just because we can do something doesn't necessarily mean we should.

Technology gives us the power to do more things than we could have imagined. The remarkable speed of technological development means that our democratic, regulatory and ethical responses are increasingly left to play catch up in its wake.

Drones, in the right time and place, can be brilliant – even life-saving. They can, and do, play an important role in emergency services, disaster management, the creation of art, scientific research, and more. They can be, and are, also used for illegal purposes, such as smuggling.¹ The delivery of takeaway meals and coffee sits somewhere in this spectrum between life-saving and dangerous.

It is clear that regulation and oversight will be critical in the management of drone technology, from one end of the spectrum to the other – ensuring that emergency services drones can operate safely, working to prevent the use of drones for criminal purposes, and regulating use across the spectrum in between. This must be driven by independent analysis and democratic processes. We must not act on the promises of proponents. Appropriate public consultation is critical.

In the current circumstances, where the first trial in Canberra caused considerable angst, and where the promises of the proponents have not been tested, the failure of the Department to ensure appropriate public consultation at this stage is damning.

This brief submission primarily calls for the public consultation to be extended both in time and scope, with a serious attempt made to garner opinions of a wide cross-section of members of the Australian public about this issue, and a moratorium on further development of drone delivery until that is complete.

¹ *Delivery Drones From A Technology Assessment Perspective: Overview Report*, Institute for Technology Assessment of the Austrian Academy of Sciences, Vienna, March 2018, pp13-14.

Key points

Failure to consult appropriately:

The Department has conspicuously failed in its responsibility to engage in appropriate public consultation on these draft planning guidelines.

As someone who has been on the public record, in previous government consultations and in the media, concerned about the impact of delivery drones, no attempt was made to inform me about this process, and I learned about it at the last minute thanks to a title in *The Conversation*. Having contacted several others in Canberra who similarly have raised concerns, I discovered that none of them had been approached by the Department to notify them of this consultation.

This calls into question any conclusions that may be drawn by the Department. It makes a mockery of the entire process if industry is comprehensively consulted and the public at large, not even those with a history of interest and concern, is not even informed that the consultation is taking place.

This submission calls for the public consultation period to be extended until at least March 2023, and a serious effort to be put in by the Department to engage a wide cross-section of the Australian public in the consultation.

Moratorium:

It is so often the case with new technology that the promises of developers and the reality experienced in the community and the environment do not match.

Given the substantial concerns about potential impact on quality of life for residents, on wildlife, on privacy, etc, there should be a full moratorium on any further operations of delivery drones (excluding emergency services) across Australian cities until truly independent reviews can be completed into a range of claims, and until a wide-reaching democratic process of consultation with the community has been undertaken.

Noise and impact on the environment and wildlife:

The impact of noise from the initial Project involving delivery drone trial at Bonython, Canberra, was stark. Numerous people found their lives disrupted by the noise of the drones, even at small numbers of delivery. The far larger numbers required to make a commercial operation viable would be intolerable.

Similarly, there has been noticeable impact on bird populations due to drone noise, both in Bonython and in north Canberra, in the second trial area.

When discussing impact on wildlife, proponents of delivery drones tend to refer only to the highly unlikely events of collisions with birds, or birds attacking drones. The far greater impact is likely to be the presence of large numbers of big, noisy drones scaring bird populations away from the areas where deliveries

are taking place. Anecdotal evidence from Bonython and Miranda certainly suggests that this is the case. I myself have witnessed it in a national park, when a smaller camera drone launched by people nearby scared away birds.

While there has been no major study of the impact of large delivery drones on bird populations, recent studies into the use of smaller, quieter scientific drones for the purposes of studying wildlife have urged caution.² While scientific drones are a tremendously useful tool, they can also have negative impacts on the populations they are studying, and must be used carefully.

It appears to still the case that no independent study of the impact on wildlife in Australian cities from large scale drone delivery has been undertaken. This must be done before the Department finalises any regulatory framework.

A full, independent study of the potential noise impacts of a large, commercial-scale operation of delivery drones on residents, on quality of life, and on mental health, must also be undertaken by the Commonwealth before any regulatory framework is put in place.

Review of industry claims:

The industry claims that appear to be taken at face value by the Department, including regarding job creation, emissions reduction, noise pollution and safety, are questionable.

The **job creation** claims celebrated by the Department's discussion paper are, on face value, typically empty spin with no analysis that jobs created in drone delivery will see jobs destroyed in other forms of delivery as well as in face-to-face food services such as cafes. Rather than simply quote industry figures, it is incumbent on government to conduct analysis.

The **environmental benefits** in terms of greenhouse gas emissions of new methods of consumption such as drone delivery remain disputed.

Project Wing's commissioned research claims that, at scale, drone delivery across Canberra could reduce emissions by 8000 tonnes a year.³ This figure is based on an extraordinary number of flights – one every 4 seconds during daylight hours across the city. Fewer flights will obviously lead to lower emissions reductions.

Most critically, these projected emissions reductions are dependent on the assumption that the flights would replace deliveries by other means – primarily car or truck. However, experience around the world has shown that new

² Hodgson, Jarrod, and Lian Pin Koh, "A guide to using drones to study wildlife: first, do no harm", *The Conversation*, May 23, 2016.

³ AlphaBeta, *Faster, Greener and Less Expensive: The Potential Impact of Delivery Drones in the Australian Capital Territory*, commissioned by Project Wing, November 2018

technological options can increase total demand rather than replace existing demand. One such study showed that Uber, which is promoted partly on the basis of reducing congestion, actually increases congestion as it outcompetes public transport, walking and cycling more than it outcompetes taxis or personal driving.⁴ The ease of being able to order a takeaway coffee or burrito from home, to be delivered by drone, is at least as likely to increase consumption of such goods than to replace existing delivery or If age is additional consumption rather than replacement, the expected emissions reductions will be halved. This underscores the need for independent study and verification.

An additional factor already experienced in Project Wing's trial is that the drones cannot carry heavy weights or large quantities. This seriously limits the service's capacity to replace any major deliveries such as family meals or groceries, and each delivery needs at least one flight – or sometimes “a fleet of drones”,⁵ with concomitantly greater environmental and social impact.

Despite these factors, it is not unlikely that there will be some emissions reductions from a shift to drone delivery, albeit likely not as substantial as those projected by proponents. But there are also other potential positive impact without the range of negative impacts drones also cause, such as supporting and encouraging cycling and walking, redeveloping local shopping centres to support local businesses, encouraging eating in rather than takeaway, etc.

It is concerning that the potential for dramatically increased waste streams from the increase in take-away and delivery caused by drones does not rate a mention in public discussion. This is in the context of the Commonwealth government seeking to be seen as taking waste seriously.

Every delivery via drone will involve at least as much packaging as a car or truck delivery, and likely more than a pick up. If, as can be expected, drone delivery increases rather than replaces consumption, the increase in packaging waste will be that much greater.

Additionally, Project Wing has proudly declared that, when only one coffee is ordered, a plastic bottle of water is added to the order, “to balance it out”.⁶ No attempt is being made to even take into consideration, let alone reduce, waste streams.

Before allowing drone delivery to take hold on the basis of claims of reduced environmental impact, a full, independent study should be undertaken,

⁴ Wolfe, Sean, “Uber and Lyft are creating more traffic and congestion instead of reducing it, according to a new report”, *Tech Insider*, July 28, 2018.

⁵ Element, Bree, “Drone coffee: Does it spill? Is it hot? A special investigation”, *Canberra Times*, December 10, 2018.

⁶ Element, Bree, “Drone coffee: Does it spill? Is it hot? A special investigation”, *Canberra Times*, December 10, 2018.

examining realistic numbers of flights and seeking to quantify replacement vs increased demand. The results of this study, not the claims of proponents, should inform any final decision

Concerns regarding public and private space:

Communities in Canberra and elsewhere are increasingly concerned about the encroachment of for-profit companies into public and private space. Any expansion of delivery drones to scale would see large numbers of drones flying over public roads and parks, as well as private homes, filming as they go, with no oversight that happens to the information collected by a globally dominant data company based in the USA.

In this government undertaking substantial consultation with the industry proponents while making at best a cursory attempt to consult with the wider community presents a very problematic picture.

No expansion or permanent siting should be allowed in the absence of a public support, demonstrated through thorough consultation.

Once again, this consultation is entirely inadequate and must be extended in time and scope if government and industry are to have credibility and social licence to operate.