

STANDING COMMITTEE ON ECONOMIC DEVELOPMENT AND TOURISM

Submission: INQUIRY INTO DRONE DELIVERY SYSTEM IN THE ACT

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To the Standing Committee on Economic Development and Tourism

The Bonython Against Drones (BAD) Action Group is a non-political community action group, formed in September 2018 in response to the large outcry by Bonython residents against the trial by Project Wing Australia (Google company), which began in July 2018, using drones (Unmanned Aerial Vehicles) to deliver a range of food, such as coffee and burritos, and some pharmacy products to our suburb. Approximately eighty percent of Bonython residents, canvassed during the gathering of signatures for a petition to be presented to the ACT Legislative Assembly, expressed their strong objections and anger at the trial being conducted around their homes. Over one thousand people signed the petition.

Many of the issues raised in this trial were identified in feedback to the Federal Parliamentary Inquiry into the Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated Systems, December 2016. However, despite the enormous identified risks, the ACT Government and the Civil Aviation Safety Authority (CASA) allowed a trial of drones over our residential suburb in the ACT.

The Project Wing Bonython drone trial is so controversial it has been the subject of much media attention in recent times - local, national and international. It has been written about in the following newspapers: The Canberra Times, The Australian, The Sydney Morning Herald, The Daily Mail in the UK and The Wall Street Journal in the USA. It has been the subject of television programs on local and national ABC, Channel 7 National News and Channel 9 "A Current Affair". It has also been a regular topic of discussion on Canberra ABC talkback radio.

BAD Action Group successfully lobbied the ACT Government to agree to conduct an inquiry into drone delivery systems in the ACT.

The following comments represent the viewpoints of our members.

- We would be happy to do a presentation to the Standing Committee on Economic Development and Tourism, should you require one.
- We also respectfully request the opportunity to provide information to you after the 15th March 2019, if the FOI request currently with the ACT government provides vital information to the Inquiry. Please note we requested this information on 25th September 2018 and have now had 4 extensions. Attachment A is evidence of the last extension.

We thank you for the opportunity to provide comment.

Bonython Against Drones Action Group

<https://bonythonagainstdrones.com/>

<https://www.facebook.com/groups/318338528900536/>

The Action Group would like to comment on the following terms of reference:

1) The decision to base the trials of the technology in the ACT and surrounding region

The decision to base the trial in the ACT did not include consideration of the impact of such a trial on the residents, nor was the residents' approval sought. There was no real or comprehensive consult of the residents of Bonython, nor were any small businesses in the local Tuggeranong area consulted or afforded the same opportunity.

The terms of this particular trial were unclear to us. Wing claimed it "envisions a future where drone delivery is the safest, fastest and most environmentally friendly mode of small item transport, and everyone can benefit from having commonly-needed goods available to them". This statement has no relevance for unwilling participants in a delivery trial.

- It is not the safest – CASA had to change rules for Wing. Residents reported many safety concerns and incidents
- It is not necessarily the fastest - any package over a certain size required multiple deliveries over a period of time, instead of one delivery. A delivery of a meal could take up to half an hour.
- It is not environmentally friendly – residents reported a diminished quality of life, loss of wildlife and the biggest concern was noise pollution. The drones have been measured at over 80 decibels at a fence boundary during a neighbourhood delivery. Bonython is situated next to the bush and is usually very peaceful.
- Not everyone can benefit from commonly needed goods – larger companies usually home deliver multiple common goods. With changing technology to electric vehicles, efficiencies of scale are with the larger technologies.

BAD had a meeting with Labor MLA Mick Gentleman and he stated that he did not invite Wing, that he had in fact invited Google Campus. Google Campus exists without a drone delivery component. Newspaper reports and Hansard reveal that in fact a drone service was invited. We believe the decision to base the drone delivery trial in the ACT was initiated by the ACT Government and Google. We do not believe, however, that this is just about deliveries of fast food. Extracts from Hansard clearly show that this delivery trial is not just about delivering "coffee and burritos", but an experiment in managing airspace and developing drone technology. BAD are aware that all other States/Territories in Australia have not allowed this sort of drone delivery trial. We are not aware of any country in the world that permits such delivery drone operations in a suburban area because of safety concerns and risks to the general public.

Attachment C, Andrew Barr to Ryan Burgess (before the trial started on 13/12/17), stated "this next phase would be world leading. I strongly welcome your plans for Canberra". "Canberra is well placed for the roll-out of new and disruptive technology". This demonstrates that the focus of the Andrew Barr's interest, due diligence and that the government had no concerns or processes in place to consult the community. Further information obtained under a FOI shows blasé and total ignorance (and trivialising) of the serious issues of the safety, regulations and impacts on residents and the environment. Comments in emails such as "The BBQ went well. Mick Gentleman encouraged them to consider Tuggeranong and all were impressed by his MG Vintage car", reflect the lack of knowledge and understanding of the technology and significant safety issues in place which require strong regulation by authorities. The correspondence is equivalent to giving your five year old the keys to the car. The government's only concern for Royalla seemed to be around their household pets "I am not sure how my dog would react" and "lets have skywhale shaped drones".

These sorts of experiments should not be conducted on residents of the ACT. If, as we believe, the trial was about managing airspace and developing of drone technology, this should be done away from the general public in more controlled environments, with scientific methodology.

The majority of Bonython residents commented on the lack of consultation. We are aware Wing organised a BBQ at Pine Island and fewer residents saw a presentation at the Tuggeranong Community Council. Wing claim they consulted by letterbox drop, but this was in fact an advertising brochure. However, many residents did not get the Wing flyer in their letterbox drop. We estimate only 1/3 of the households received the flyer, which was information-giving, not consultation. The flyer stated "*Tuggeranong residents are invited to come by and get to know the Wing team, learn about the trial and order free prizes by drone*".

Those residents who did attend have told us had they seen the drone in operation (not the Wing publicity video with music playing to drown out the drone noise), they would have never agreed and signed up to the trial.

The decision to base the trial in the ACT, we believe, was misguided and irresponsible. It has no basis except for the ACT Government being persuaded by a large corporate firm, big money splashed around, and thinking they would get recognition for forward thinking. This is wrong. Any responsible government or regulatory body (CASA), having identified the many serious risks, should not have proceeded until ALL the risks were addressed.

BAD has already expressed its concerns about Wing's proposed future expansion of the drone service to Northern Canberra:

- Despite the many adverse effects and complaints experienced and reported from the Bonython trial
- Without any independent evaluation of the trial having been conducted
- Despite the fact that this Inquiry is in place

Obviously CASA must issue a new Instrument of Exemption to cover the changed conditions pertaining to the northern suburbs' operation.

It appears that Wing are making the rules, bending the truth and the ACT and Federal Governments are, in consequence failing listen to and protect the public, and are being complacent in terms of evaluating the serious effects.

2) The economic benefit of drone delivery technology being tested in the ACT including;

(i)The investment that has been brought in to the Territory.

BAD question if there is any economic benefit to the ACT as the drone delivery trial was done for free. They had many costs during the trial including a lease fee, publicity, setting up a temporary base, etc. The trial failed to provide competitive opportunity to other delivery providers. Until a fee is included in the costs, the real value of using the services cannot be assessed. How many of the few residents who took up the Wing offer would have done so if they had to pay a delivery fee on top of the price of their coffee?. Note that the 200 flights claimed by Wing in the trial include many, many, multiple deliveries to households to deliver a meal.

Wing's strategy paper (obtained under FOI) "Drones: delivering benefits to the ACT" contains no supporting evidence or data. It is based on assumptions, mainly on taking business from existing providers such as Deliveraroo and Uber Eats. It is also based incorrectly on the business applied to the entire population of Canberra, which is unrealistic given that the drones are not allowed to fly in many sensitive areas. How 2000 flights in Bonython over a six month period can become 11,000 flights per day is astonishing – impossible unless the drones deliver over the whole of the ACT. We question if this is possible as there are many restrictions which would not permit this. For example, current drone rules on flying over main roads, near the airport and the population (especially the more affluent suburbs) would not accept their peace and homes being diminished, as happened with Bonython residents. The report claimed growth in retail sales in the ACT by \$40 million by 2030. There is no evidence in this report to substantiate where and in which industries the sales will be generated from just deliver drones.

We believe that merely introducing a new method of delivery of limited goods (small and light only) will not add \$40m dollars to the ACT economy. According to media reports, only 160 Bonython households signed up for the trial. This take-up rate is less than 10% of the population of Bonython. Not all these people had deliveries and many dropped out. These low numbers, and the significant negative community reaction in Bonython to limited drone deliveries, is a testament to the low take up rate and non-acceptance of this technology. Since only 'lighter items – less than 1.5 kilos" can be delivered, the economic benefit of single deliveries against a van which delivers 1000 items at a time is highly questionable.

Compliance

BAD are concerned about the lack of regulations and compliance measures over drones, as Wing only have to self-report any incidents. Bonython residents have reported to us they have witnessed a number of incidents. Wing claim these are "controlled landings", and disputes other eye witness accounts, but we claim they are real incidents. The Federal Government announced in May 2018 additional money to CASA to help develop compliance. Until these compliance measures are in place, there should be no further trials:

<https://www.innovationaus.com/2018/05/Budget-2018-A-tech-round-up>

The drone industry and its regulations are still in their infancy. CASA only announced in January 2019 the requirement to register all drones. Until all the regulations are in place, all trials involving the public should cease. What is stopping private and anti-drones establishing themselves or counter-drone operators establishing services in the ACT?

Canberra Times 19 February 2018, "Age of the drone has dawned, but government is still in the dark on how to regulate it" by Claudio Bozzi (lecturer in law at Deakin University) states "Incidents of drones intruding on personal privacy, compromising security and raising safety concerns rightly receive considerable media attention. The proliferation of inexpensive drones carrying sophisticated imaging, detection and transmission equipment capable of collecting, storing and sending personal data raises practical, ethical and legal questions regarding privacy and the safety of the national airspace". He outlines in detail the issues with the different privacy laws and refers to the recent Senate Inquiry into drone operational safety which made 10 recommendations - the Federal Government has only agreed with two.

Lack of transparency and incorrect information

Wing advised they would not share their feedback publicly or to the ACT Government. They will only provide a “summary” at the end of the trial. What have they got to hide? BAD believe an audit should be conducted on the trial to ensure the veracity of the results.

BAD are also aware that many of the statements made by Wing are incorrect. We understand that one of our members has highlighted these incorrect statements in their submission to the Inquiry. If Wing are making incorrect statements in the media, how much of what they propose and say can be believed? Wing is a subsidiary of Google who were just reported as breaking antitrust law and hit with a \$2.7 billion fine for having a price-comparison feature built into the company's search engine. It is telling that most of the documents we have obtained under FOI have been signed by a Google representative. BAD are concerned that the cameras and data Wing send back to the US will not be safe, given the recent breaking of the law. For example in January 2019 Google was fined 50 Euros in France because its data consent policies were not easily assessable or transparent.

<https://www.theverge.com/2018/11/27/18114111/google-location-tracking-gdpr-challenge-european-deceptive>

(ii) The number of jobs that have been created as part of the trial.

BAD believe that the proposed expansion of the trial will result in job losses. We have consulted economic experts at the Australian National University who have confirmed that there will be no growth in jobs as the drone delivery service will simply shift the jobs from one sector to another. We believe that we are now faced with potential job losses for those employed in the courier and delivery area. These are generally low skilled, low paid and casual jobs. The drones would replace people employed in courier and delivery areas.

Evidence that delivery drivers would be replaced is stated in the Canberra Times 15/11/18. Steve Evans quoted James Burgess's description of how the service would work in Mitchell as “the drones would hover 7 metres off the ground and lower a line with a container. Sellers and buyers would hook and unhook the baskets containing the goods”. So, the end results – job losses.

(iii) The extent of collaboration with local industry and academic institutions

There has been no collaboration with local industry and academic institutions that has been reported. Wing did not use local Tuggeranong businesses, instead using companies that were not part of the local Tuggeranong business community. The entire extent of their marketing campaign focused on KickStart (for the coffees), Guzman y Gomez (for the burritos), and Chemist Warehouse – none operating in the Tuggeranong area. All to the detriment of local businesses.

As far as we are aware, there has been no collaboration or discussion with local couriers and delivery agencies.

3) The extent of regulatory oversight of drone technology at various levels of government including but not limited to:

(i) Local authorities such as the Environment Protection Authority (EPA), Worksafe and Access Canberra

EPA – There are no regulations under the EPA Acts that apply to drones, therefore the EPA has not accepted any responsibility for addressing concerns such as the excessive noise levels. The Environment Protection Act 1997, Section 8 specifically does not apply to “Aircraft” (see below).

8 Limitation of application in relation to certain people and things

- (1) This Act does not apply in relation to noise made by or a pollutant emitted into the air by—
- (a) a light rail vehicle or other train; or
 - (b) a Commonwealth jurisdiction aircraft within the meaning of the *Air Services Act 1995* (Cwlth); or
 - (c) a person using only his or her body; or
 - (d) an animal; or
 - (e) a motor vehicle being driven on a road unless the motor

ACT Government tells us that they are not responsible for the noise. Airservices Australia told BAD, in regards to noise, they are only responsible for “manned aircraft”. As drones are classed as “unmanned aerial vehicles”, this means that NO GOVERNMENT AGENCY has responsibility for the noise of the drones. We have been told that the only avenue for complaints about the noise is to the company making the noise - Project Wing.

Attachment D shows the zoning regulations for the site. In particular, they failed to take into consideration the requirement to d. Protect the amenity of nearby residential areas, with regard to noise, traffic, parking and privacy.

We note that Airservices Australia’s submission makes reference to receiving six complaints from people impacted by the noise. Five were unhappy about the frequency of the drones over their area, three raised privacy concerns and one was about safety. BAD is aware of many more people who complained to Airservices Australia, and after being referred to other agencies first, were then advised by Airservices Australia that they were not responsible for “drone” noise.

Worksafe – have nothing to do with this trial or drones that we are aware of.

ACT Parks and Wildlife – we are aware that Parks and Wildlife (through various emails), granted a licence for the drone trial to operate over the relevant parks in the Bonython area including Pine Island area (a popular spot for Canberrans during summer). Part of the condition was that Wing was supposed to do an avian study. Apparently nobody will have access to this avian study but Wing, and we have concerns that at the start of the trial (a baseline was not established on the wildlife in the area), or what research has occurred since the trial has started.

The ACT Government is failing to follow up on any of the imposed requirements, make information available or take responsibility for its actions in allowing the trial to proceed.

Access Canberra – we are aware many complaints were referred through Access Canberra, however as these were outside the “normal business” for the government, they were referred incorrectly back to CASA. No one in local government had any idea of who, where and what to do with complaints. The Action Group has sent many emails and letters to the ACT Government, and has either received incorrect information, nonsense information or no response at all. The question to ask is – who is responsible for the noise? The answer – apparently no one. The noise is not regulated by any Federal or ACT agency.

(ii) Commonwealth agencies such as Airservices Australia and Civil Aviation Safety Authority

CASA is responsible for the safety and regulatory aspects of the drones. Despite the residents of Bonython reporting drone incidents, these were ignored by CASA, as Wing is required to ‘self

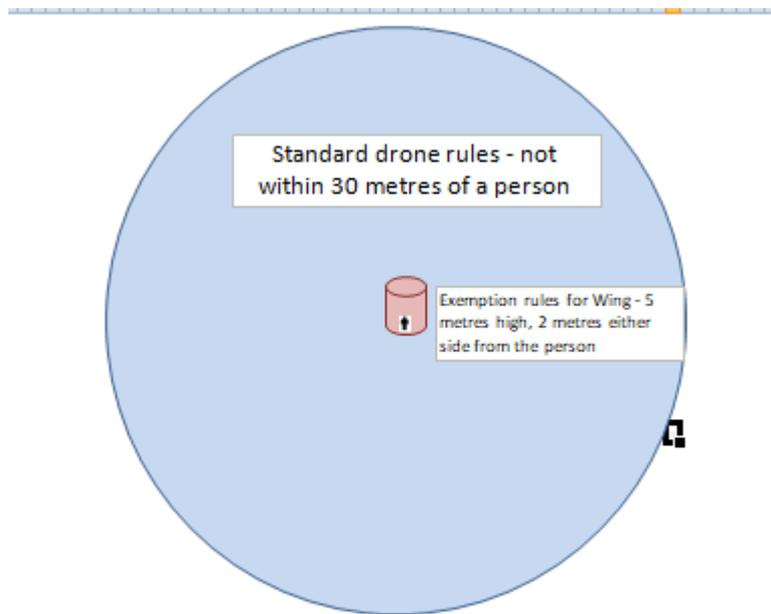
report'. CASA has not accepted that drones landing in other people's property, drones dropping their loads, drones flying low near cars or bird attacks are reportable incidents.

The FOI document from CASA revealed that CASA issued an Exemption to existing Regulations that apply to all other drone operators in Australia, i.e. that a drone cannot operate within 30 metres of a person. The Exemption issued to Project Wing by CASA to conduct deliveries to homes in Bonython allows its drones to operate within 5 metres overhead and 2 metres horizontal distance from a person. There is no operator control of the drone during deliveries - it is software controlled flight. How can the operator (Project Wing) ensure that the minimum distances mandated from persons on the ground are adhered to? NO OTHER GOVERNMENT IN THE WORLD allows this. No trials have been conducted to ensure the safety of people subjected to such operations. The residents of Bonython are guinea pigs

BAD wrote to Minister McCormack MP, raising our concerns over the drone trial. We note that his advice from CASA was INCORRECT, as he states Wing were allowed to operate within 30 metres of a person. The FOI documents clearly show it to be 5 metres overhead and 2 metres horizontal distance from a person. (see incorrect information below).

I have sought advice from the Civil Aviation Safety Authority (CASA) in relation to the matter you have raised about operational zones for the Wing drone delivery trial. CASA advised that the exemption instrument RPAS2017-1748 you received under the Freedom of Information request provides Wing with exemptions from CASA's standard operating conditions; that is, it allows Wing to operate within 30 metres of a person and in populous areas, such as urban or suburban zones.

To put this into context, the following diagram depicts the changes in distance. The blue area represents the standard drone rules, the red cylinder with the stick figure inside represents the Exemption issued to Project Wing. That is why residents feel unsafe, violated and angry.



We have been advised by a technical expert with over eight years' experience writing CASA regulations that the wording of the Exemption is unclear and leaves the trial open to having its veracity questioned. We have entered into correspondence with CASA about this and are unsatisfied with their response. We have sought legal assistance with this matter.

Project Wing and the ACT Government tell us this trial is a world-first. Therefore, with the world's aviation/drone industries scrutinising it, we believe it is important that the wording of the Exemption is accurate, and that its conditions guarantee public safety. We do not believe this to be the case.

CASA also tells us it is not responsible for noise regulation of the drones or for privacy issues. Likewise no other Government agency, State or Federal, is responsible for ensuring residents' privacy is protected from the drones.

There is a serious lack of regulatory oversight at all levels of government which allows the excessive and substantial noise (80 decibels - EPA regulates residential noise at 45 decibels during the day and 35 decibels at night) of these drones to be unregulated. There is also a lack of regulatory oversight at all levels of government which allows the serious issue of privacy to be unregulated.

Given the number of recent drone incidents worldwide (Gatwick Airport, Canberra NYE, Tasmanian bushfires, etc); we question why the rules were relaxed for the Project Wing trial. If Wing cannot operate within the current laws, then it brings into question other issues such as commercial agendas overriding normal governance arrangements and the motives/agenda of governments. Will CASA change the rules for other drone delivery agencies (such as Amazon)? On what basis was this business decision made? Does business override public safety and quality of life issues?

The Federal Government in 2016 called for submissions into the Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems:

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

BAD recently received a copy of the Federal Submission under our FOI request to the ACT government. There are many concerns and issues raised in the submission. We question why the ACT Government initiated the Project Wing drone trial in Bonython given that it knew of the many serious and significant risks involved. To go ahead with further operations is, in our opinion, further gross negligence disguised as a business opportunity for a particular multinational company.

The Bonython Against Drones Action Group also wrote to the Federal Minister for Transport, Infrastructure and Regional Development highlighting the many issues related to the drone trial and lack of oversight and regulations. The original response by the Federal Minister acknowledges that a whole-of-government approach to RPAS (drones) will be required.

The response agrees with the recommendation to develop a whole of government approach to RPAS in Australia. The Department of Infrastructure, Regional Development and Cities will lead this work with relevant departments and agencies to develop a clear view on those matters that fall outside of the Civil Aviation Safety Authority's remit; including privacy, noise and environmental impacts. It is the intent that this work will help to clarify for the public, the separate areas of responsibility in relation to drone issues.

Given that there are no laws in place to manage the impacts of the drones, it is highly irresponsible and unethical that the trials continue. Until the Australian public can be assured of its safety and basic human rights (United Nations Human Rights Declaration Article 12), then all commercial use of drones should be ceased.

Airservices Australia – has no responsibility for unmanned aircraft

4) The extent of any environmental impact as a result of trialling drone delivery technology on:

a. Greenhouse gas emissions

The claims by Wing that drones will substantially reduce carbon footprint are incorrect. The reduction in carbon footprint by drones only applies to where they don't have far to fly and have a light load – therefore a very small component of the delivery courier industry. The Wing business case is largely based on flying deliveries a considerable distance. The claims fail to acknowledge

that by 2030 (or probably sooner) over 50% of cars will be electric; this change in itself will significantly reduce the carbon footprint of vehicles and delivery services. The research Wing refers to is by Professor Goodchild in the USA (Riot Act website). The article has been misrepresented by Wing as they only quoted selected bits, it actually states: “researchers found that drones tend to have carbon dioxide emissions advantages over trucks when the drones don’t have to fly very far to their destinations or when a delivery route has few recipients”. Trucks — which can offer environmental benefits by carrying everything from clothes to appliances to furniture in a single trip — become a more climate-friendly alternative when a delivery route has many stops or is farther away from a central warehouse”. The statement by Professor Goodchild “that drones have a less carbon footprint” is only correct when it applies to small and light goods:

<http://www.washington.edu/news/2017/05/30/drone-vs-truck-deliveries-which-create-less-carbon-pollution/>

If the ACT wants to significantly reduce its carbon footprint, then along with the light rail, the government should be encouraging electric vehicles, installing more charging stations, giving incentives to couriers and delivery companies to go electric.

b. Noise Pollution

Comments by residents in the Bonython area highlight the following:

- The drones are large (1.5 m wide/3m.long), very noisy like an F1 racing car and make a high-pitched sound which can be heard from a long way off. Drone noise has been measured at 85 decibels from 35 meters. They can be heard from inside closed houses, even with double-glazing.
- Over 80% of the residents in Bonython oppose the trial.
- No agency (ACT Government, CASA, Airservices Australia, EPA) will take responsibility for regulating the noise made by drones.

BAD has researched the dangers of noise pollution. The Public Health Association of Australia: Policy – Environmental Noise Policy (Attachment B) recognises environmental noise as a public health risk. It states, people have varying levels of tolerance to noise. In some situations noise may not be particularly loud, but may be distracting. Moreover, the repetitive nature of a particular noise and/or the inability of an individual to control it can cause annoyance. Examples include dogs barking and bass amplification of recreational music. Vulnerable groups, such as children, older persons, people with mental health issues, may be affected by noise in different ways compared to other members of the population

In addition, the author and scientist Dr Bruce Rapley states that modern technological environments produce noise on a basis never before endured by humans, and there is increasing evidence of serious threats to human and animal health. His book - Conversations for a Small Planet, Volume 3, Biological Consequences of Low-Frequency Sound, explains the adverse health effects of sound pollution from man-made technology. The most recent example of technological sound pollution comes from wind turbines, but he also stresses that this is only one source of modern environmental sound pollution – there are many others.

BAD consulted with a specialist musicologist and provided two videos of the delivery drones. The specialist acknowledged that the early drones were slightly louder than the later drones as they were a higher pitch, however, they stated that both sounds were very intrusive, in fact they described them as “shocking”. Two thirds of the sounds were mainly around high A/Bb nearly two octaves above middle C in the higher frequencies. The 2/3 sounds intersect and change between themselves. They commented, “They’re screeching, big - time. But there is a screech or two higher than in the main sound, which is really piercing. It sounds above high C (2 octaves above middle C. It is like 3 sopranos wallowing and swapping between themselves. One doesn’t hear the lower notes until right at the end of the video, and they are equivalent to the middle notes in the later video sound. The latter video is slightly quieter, BUT – the lower frequencies are potentially the big health hazards. Low frequency sound can be used as a weapon and has been known to cause insanity; you will need to research this further.

The Noise and Health article on Low frequency noise, the frequency range from about 10Hz to 200Hz, has been recognised as a special environmental noise problem, particularly to sensitive people in their homes. Conventional methods of assessing annoyance, typically based on A-weighted equivalent level, are inadequate for low frequency noise and lead to incorrect decisions by regulatory authorities. There have been a large number of laboratory measurements of annoyance by low frequency noise, each with different spectra and levels, making comparisons difficult, but the main conclusions are that annoyance of low frequencies increases rapidly with level.

<http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2004;volume=6;issue=23;spage=59;epage=72;auiast=Leventhall>

c. Native wildlife and domestic animals

- The local bird life has decreased in the area.
- Dogs and cats are reportedly stressed and injuring themselves as they are spooked by the drones.
- Neighbours are complaining because of the dogs barking continually on flight days.
- No independent avian study on impacts has been done.
- We have video evidence on our website of a magpie attacking the drone, and eyewitness accounts of other bird attack incidents.
- Other domestic animals are affected. For instance, the local Royalla newspaper reported “Royalla group began posting angry accounts of livestock being harmed as they ran in fear from the low-flying drones. Their group had trouble getting their voices heard as no media were interested as drones are cool, no parliamentarians were interested, CASA had approved the trial and the amount of noise this man was experiencing was not a concern to anyone”.

5) Ways to improve the use of drone delivery technology within the ACT

BAD believe there are areas where drones can be very useful. These uses have also been posted up on our Face book page by our members. Drones need to focus on specialist and other emergency services, where they will make a valuable impact. There are many of these examples already in the community - life saving, aerial photography, search and rescue, surveillance, delivering immunisations and medical supplies to remote areas, surveying, digital surface modelling, aerial delivery of packages and humanitarian relief supplies, assistance with agriculture, wildlife research, power line inspections, etc

6) Any other relevant matters

All the issues were well known and identified in the Risk Assessment undertaken by CASA and the ACT Government (gained under FOI).

The decision to base the drone delivery trial in the ACT was initiated by the ACT Government and Google X. During this process there was no consultation with the public. Extracts from Hansard clearly show that this delivery trial is not about a delivering “coffee and burritos”, but an experiment in managing airspace and developing drone technology.

The risks outlines in the risk assessment are detailed below with the actually impacts of these risks:

- **Noise**
 - The drones are large, very noisy like at F1 racing car and make a high-pitched sound which you can hear them from a long way off. NASA study says drones are more annoying than trucks, motorbikes, etc.
 - No agency (ACT Government, CASA, Airservices Australia) will take responsibility for monitoring the noise made by drones.
 - They can be heard from inside closed houses, even with double-glazing and it is worse when people have their houses open in warmer weather.
 - During the trial, people elected to leave their homes to take a break from drone noise.
- **Privacy concerns**
 - Surveillance and intrusion of privacy in people’s own backyards.
 - There is no open and transparent management of personal information collected.
 - Wing state that images are stored for 30 days in the USA, however in that time we have no knowledge who has access to that data, for what purposes and is it being shared with a third party?
 - Risks assessment acknowledges that there is “no recognised common law action in tort for breach of privacy”.

http://thelegaleagle.com.au/drones-neighbours-and-privacy/?fbclid=IwAR1fU2CpLwGoptRFdEEYr1WgcMVQ6DaQD3ikZabqneyVNddb3Jr8OA_dg
- **Impact on wildlife and domestic pets**
 - The bird life has enormously decreased in the Bonython area.
 - Dogs are reportedly stressed and injuring themselves as they are spooked by the drones.
 - Neighbours are complaining because of the dogs barking continually on flight days.
 - No independent avian study on impacts.
- **Loss of amenity – visual and noise pollution, emotional and mental health**
 - Anxiety and stress levels due to anger are increasing every time they hear a drone fly over. This effect has been so extreme as to manifest in death threats to be made to Project Wing, as reported by ACT Police.
 - No peace and quiet when going for walks in the suburbs.
 - Some young children are too scared to go outside when the drones are around.
 - Disrupting and disturbing for people who need to sleep (shift workers) during the day.

- People who suffer from chronic migraines report living in fear of the drone noise triggering the condition.
- Drones constantly flying at levels of 50 to 100 feet over people's backyards, and closer when they come down to deliver, making noise of up to 85 decibels is an outrageous, intolerable and unacceptable violation of their peace, privacy and basic human rights.
- **Cyber security**
 - Canberra has many sensitive government agencies. Parliament house recently constructed a “drone shelter” to prevent security attacks from drones.
 - Media reports of large companies (face book) breaching privacy and security.
 - A person bent on doing damage, collecting data, attacking government buildings etc would have the perfect cover for flying a drone when many other delivery drones are operating in the area
- **Sensitive location – geographical issue**
 - Not supposed to fly over nature parks and public areas, all these rules relaxed for this trial. When at Pine Island you can hear the high-pitched drones take off, where normally it was the sounds of birds and nature.
 - They fly over the local mountain bike trails and tracks around Stranger Pond, an area with many walkers including parents with children.
 - There are many identified high risks areas in ACT.
- **Distraction risks to drivers, cyclists and pedestrians, safety, collision with people, infrastructure, other drones**
 - Wing self report to CASA, and have not reported any safety issues, even though many cited by residents. Wing claim they are ‘controlled landings’, which we say are ‘unplanned landings’ caused by dangerous circumstances that Wing cannot control.
 - No independent body or agency which regulates or polices Wing.
 - There have been a number of mishaps that have been reported to us by residents that are not acknowledged by Wing, CASA or the ACT Government For instance, we have video evidence of bird strikes and a drone delivery on top of a parked car.
- **Land use concerns. Delivery drones are not currently defined in the territory plan, thus not permitted except for a temporary use.**
 - Project Wing states in the media it is setting up a “permanent” base in Mitchell.
 - Why is the ACT Government permitting delivery drones without first changing their planning legislation?
 - Why are they allowed to operate on nature reserve and within the Murrumbidgee Corridor? This involves the commercial use of a public nature reserve. To operate elsewhere in the ACT they would also need to fly over public reserves.
- **Feedback and reporting (ACT government agency objections)**
- Other government agencies may raise concerns about drone use near or above their sites (eg. Alexander Maconochie Centre, schools, other institutions).
 - There is no specific and formally established avenue for residents to directly submit feedback or comment other than through Wing. Wing has already stated they will not release the feedback publically or to the ACT government. Wing is self assessing and undertaking their own review of the trial.
 - The ACT Government imposed this trial on Bonython residents with no consultation or consideration of the impact on people's lives. There has been no collaboration or collective decision making involving Bonython residents.
 - ACT Government has NOT accepted and acted on valid concerns by residents
- **Trespass**
 - No laws about airspace over homes (as other countries, including the USA have).
 - Recent media exposure of illegal drone activity.
- **Fire ignition**

- Not allowed to operate during period of total fire bans. Obviously considered a fire hazard in some circumstances.
- **Negligence**
 - Are we covered by public liability? No information on who is responsible for injuries.
- **Reputational damage**
 - Local business - the chemist and Mexican food businesses currently operating in the drone delivery service are not local to the area and undercut existing businesses.
 - Wing and the ACT Government are not presenting transparency on the drone issues.
 - Wing has provided information only in the form of advertising and marketing their delivery service.
 - The ACT Government identified “if the project is not supported by the community, or there is an incident or accident, the ACT Government may be held responsible - or for instance face adverse public comment or adverse findings in the event of a coronial inquest, or not being aware of incidents occurring. NOTE: CASA may face a similar reputational risk in terms of their role in providing regulatory approval.
- **Violation of our human rights, UN Article 12**
 - Because there are no regulations (except for CASA around safety) that cover the operations of the drones, it is difficult for us to challenge their use with legal arguments.
 - The drones interfere with our family/life and our quality of life. It is morally and ethically wrong that we are subject to this trial without any recourse.
 - This is a direct violation of our human rights as Article 12 of the Universal Declaration of human rights states “No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the **right** to the protection of the law against such interference or attacks”.
 - In a response from Minister for Infrastructure, Transport and Regional Development dated 5th December 2018, he admits there are gaps in the law and “they need to work with relevant agencies to develop a clear view on those matters that fall outside CASA’s remit, including privacy, noise and environmental impacts”.
 - Lack of compliance, no one responsible for managing drones, Wing self report.
- **Residential tenancy legislation**
 - The residential tenancy legislation of every State/Territory enshrines the right of tenants to quiet enjoyment, expanding in other jurisdictions to include the right to reasonable peace, comfort and privacy.
- **Parliamentary Inquiry in place (submissions due 22/2/19)**
 - An ACT Legislative Inquiry Assembly Inquiry has been approved following significant complaints about the drones since the trial started in July.
 - Gai Brodtmann has called in the Federal Parliament for an independent inquiry on the delivery drones and trial.
- **Purpose of drone deliveries - Unreliability and limited delivery options**
 - Low take up rates with only 1.5 – 2% of Bonython households electing to participate in the trial. Actual number is lower still.
 - There are a number of contribution factors which make many households ineligible for the drone delivery service. These include the following restrictions:
 - Drones cannot deliver to high rise buildings
 - Drones cannot delivery to other high density residences (units, flats, aged care, etc) as there is nowhere within these bounds that they can deliver a parcel
 - Drones cannot operate within national areas of significance – such as near Parliament House, Treasury, etc

- Drones cannot operate at night time
- Drones cannot operate over public areas, such as parks, schools, sports grounds, etc
- Drones cannot operate within 5km of an airport
- Drones cannot operate when there is a total fire ban
- Drones cannot operate in adverse weather conditions including high winds, storms and rain.
- Many parcels require a “signature” from the resident
- Drones cannot deliver many pharmaceuticals and medicines (only ‘over the counter’)
- Special requirements to leave parcels cannot be accommodated
- Drone can only deliver up to 1.2 kilos, any larger requires either multiple trips or a larger drone.

Attachment A: FOI request extension with ACT Government

Dear Ms Sheather,

I am writing to thank you again for your continued patience and the clarification you provided regarding the scope of your application submitted under the *Freedom of Information Act 2016* (the Act) for information on Project Wings Drone Trials in the ACT.

I am also writing to provide you with an update on processing underway for Part 2 of your application.

To date, over a thousand documents have been assessed in the processing of your application. Further assessment has been conducted to meet the requirements of your revised application received on 5 February 2019 and more than 40 documents have been identified as relevant.

The processing of your application involves extensive and complex third party consultation. Under the Act, we are obliged to consult with relevant third parties on information concerning them that may be released.

I understand you have made clear your preference that your application is finalised as soon as possible, however, not later than 15 February 2019. A full response to your application will not be able to be provided by 15 February 2019 due to the work entailed in meeting our requirements under the Act. Therefore, I am seeking your instruction on how to proceed with your application and provide options below for your consideration:

1. A complete decision is finalised by **15 March 2019** to conclude the assessment and consultation process for relevant documents.
2. A decision on access to documents that do not require third party consultation is finalised by **20 February 2019**, and a decision on access to the remaining portion requiring third party consultation is finalised by **15 March 2019**.

I want to assure you that we are working very hard to provide you with information you are seeking. Significant agency resources are dedicated to processing your request, with two FOI officers working on finalising the response to your application. I would like to thank you again for your patience, responsiveness and willingness to accommodate previous extensions of time and I hope that you will be agreeable to a further extension of time to **15 March 2019** to enable us to meet our obligations.

Your earliest advice on this matter would be greatly appreciated.

If you wish to discuss your request please contact me on (02) 6205 8995 or my manager, Ms Genevra Donne, on (02) 6207 9313.

Kind regards,
Daria.

Dr Daria Alieva | Freedom of Information and Records Officer

Environment, Planning and Sustainable Development Directorate | ACT Government

Phone: 02 6205 8995 | Email: daria.alieva@act.gov.au

Level 2, Dame Pattie Menzies House North Building | GPO Box 158 Canberra ACT 2601|

www.environment.act.gov.au | www.planning.act.gov.au

Attachment B

20 Napier Close Deakin ACT Australia 2600 – PO Box 319 Curtin ACT Australia 2605 T (02) 6285 2373 E phaa@phaa.net.au W www.phaa.net.au

Public Health Association of Australia: Policy-at-a-glance – Environmental Noise Policy

Key message:

PHAA will –

1. Advocate for environmental noise to be regarded as a public health issue.
2. Advocate for clear standards for prevention and management of noise.
3. Advocate for development and implementation of policies and strategies to promote health by reducing adverse environmental consequences from noise pollution.
4. Advocate for measures to raise community awareness of and commitment to implementing the necessary policy, structural and behavioural changes for addressing adverse environmental noise.

Summary:

Environmental noise is a public health issue that requires serious attention to limit its adverse effects as urbanisation increases. This policy describes environmental noise pollution and proposes action for PHAA to take.

Audience:

Federal, State and Territory Governments.

Responsibility:

PHAA's Ecology and Environment Special Interest Group (SIG).

Date policy adopted:

October 2017

Contacts:

Peter Tait & Lea Merone, Co-Convenors, Ecology and Environment SIG

The Public Health Association of Australia notes that:

1. Environmental noise is increasingly being recognised as a public health issue.¹⁻³
2. Sound is created when a vibrating source causes energy to travel through the air as pressure waves. The waves may be reflected or scattered by objects so that the sound reaching the ear may be different from the sound originally generated. The sound pressure level is measured in decibels (dB).
3. Common noise sources vary in sound level, for instance, normal conversation (60dB), lawnmower (90dB), chainsaw (100dB), rock drilling (120dB) and jet engine at 30 metres (140dB).⁴
4. Sound can also be characterised by their frequency (pitch). Frequency is measured in hertz (Hz), which gives the number of cycles that occur per second.

5. Noise is a sound that is loud, disturbing or unpleasant – in effect, unwanted sound.
6. People have varying levels of tolerance to noise. In some situations noise may not be particularly loud, but may be distracting. Moreover, the repetitive nature of a particular noise and/or the inability of an individual to control it can cause annoyance. Examples include dogs barking and bass amplification of recreational music.
7. Vulnerable groups, such as children, older persons, people with mental health issues, may be affected by noise in different ways compared to other members of the population.²
8. Environmental noise pollution relates to ambient sound beyond comfort levels. Numerous sources including traffic, construction, aviation, industrial, as well as some recreational activities exist.^{5, 6}
9. Deleterious effects of noise can include hearing loss,⁷ sensory effects such as pain, annoyance⁶ and sleep disturbance.^{8, 9}
10. Environmental sleep disorder is due to an environmental factor that causes either insomnia or daytime fatigue and drowsiness. Other effects include impairment of concentration, attention and cognitive performance, depression and irritability.¹⁰
11. The relationship between sleep and health is generally well accepted. Insufficient sleep can affect endocrine and metabolic function ¹¹ or trigger inflammation, which may contribute to cardiovascular events. CRP (an inflammatory marker) levels have been found to linearly increase with sleep loss.¹²
12. Long-term environmental noise exposure can affect stress levels,¹³ and may increase the risk of hypertension (aircraft and road traffic noise) and elevated risks of heart attacks (road traffic noise).^{14, 15}

PHAA Policy Statement on: Environmental Noise Policy Statement

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13. Categorising noise with respect to sound level, pitch and intensity, and correct exposure is important in assessing impact.
 14. The World Health Organization (WHO) published the Night Noise Guidelines for Europe. The Guidelines presented evidence of the health effects of night time noise and recommended threshold values to protect health. An annual average night exposure not exceeding 40 decibel (dB) outdoors has been recommended.¹⁰
- The Public Health Association of Australia affirms the following principles:
15. Action to ensure a safe and healthy environment is a critical public health priority.
 16. When society wide change is necessary for the common good, government’s role is to lead, inform, regulate, monitor and enforce, and to motivate behaviour change by individuals and corporations.
 17. Producers of pollution, including noise pollution, should pay the costs of remediation.

The Public Health Association of Australia believes that the following steps should be undertaken:

18. Competent authorities including government and relevant experts should work together to clearly define parameters for noise level, exposure assessment, and measures for assessing the health effects of noise.

19. Competent authorities should draw up “strategic noise maps” for existing major transport routes and other developments, using harmonised noise indicators L_{den} (day-evening-night equivalent level) and L_{night} (night equivalent level) as recommended in the EU policy.⁵

20. Proposed developments such as roads, rail lines, airports, mining, and industry should be required to undertake a strategic noise impact assessment before commencement of the development, and ensure noise minimisation design and engineering is included in development proposals.

21. Local noise issues should be identified through consultation with the public and local organisations. A policy to maintain acceptable amenity in terms of environmental noise should be developed and implemented at a local Council level. Strategies to reduce unacceptable noise should also be developed in consultation with residents and implemented at a local level.

22. A burden of disease relevant to environmental noise pollution should be established within constraints of current scientific knowledge.

23. A public health strategy should be investigated to reduce the number of people currently adversely impacted by environmental noise.

PHAA Policy Statement on: Environmental Noise Policy Statement

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24. Innovative strategies for noise reduction in existing buildings and in development of new building materials should be explored.

The Public Health Association of Australia resolves to undertake the following actions:

25. Advocate for development and implementation by government of policies and strategies to both promote health and reduce adverse environmental consequences from noise pollution.

26. Advocate for measures designed to raise community awareness of and commitment to implementing the necessary policy, structural, political and behavioural changes for addressing adverse environmental noise.

27. Work with other organisations/agencies at the national, jurisdictional and local level to support these actions.

Attachment C – Letter to Burgess

Minister for Economic Development
Minister for Tourism and Major Events

Obj #17/32079

James Burgess
Co-Lead
Project Wing
[REDACTED]

Dear Mr Burgess

Thank you for your letter of 13 November 2017 with an update on Project Wing's current trials in Queanbeyan and Royalla. I am pleased to hear that the trials are going well.

While I was not available to meet with you on your recent trip, I would be happy to take you up on your offer to see your operations early in the new year. I'll ask my office to be in touch about the details.

I note that you are hoping to move in early 2018 to a new site in Tuggeranong along Pine Island Road. I understand that your discussions with the Environment, Planning and Sustainable Development Directorate have been progressing well. This next phase would be world leading and I appreciate your assurances around safety.

I strongly welcome your plans for Canberra and the ACT Government is available to assist with these efforts where appropriate. Canberra is well placed for the rollout of new and disruptive technologies and I welcome your efforts to engage with local businesses to form part of the expanding product offering.

Thank you again for the update and I look forward to meeting with you.

Yours sincerely


Andrew Barr MLA
Chief Minister
13 DEC 2017

Attachment B – Zoning regulations

3 SITE HISTORY

3.1 Previous Investigations

Arcadis is not aware of any previous environmental investigations for the site.

3.2 Zoning

The site currently falls under multiple zonings. The land use zones and zone objectives are listed below:

CZ6: LEISURE AND ACCOMODATION

- a. Provide for the development of entertainment, accommodation and leisure facilities for residents of and visitors to the ACT and surrounding region
- b. Protect leisure and accommodation uses from competition from higher order commercial uses, and encourage activities that enhance the region's economic diversity and employment prospects
- c. Ensure leisure and accommodation facilities have convenient access to public transport
- d. Protect the amenity of nearby residential areas, with regard to noise, traffic, parking and privacy
- e. Ensure the location of facilities, and their design and landscaping is compatible with environmental values
- f. Ensure that the bulk, scale, size, design and landscaping of development is compatible with the surrounding landscape
- g. Encourage activity at street frontage level and provide an appropriate level of surveillance of the public realm