

Use caution, birds in vicinity

Gary Cooke, President, World Birdstrike Association, 1 Lillibridge Xing, Savannah, GA 31411
e-mail: garycooke@hotmail.com

Abstract. With the recent spate of airport shutdowns due to drone sightings, it should give us pause to question why would an airport cease operations due to a 2 kg drone, but apparently do nothing when one or more 10 kg birds appear in the airport environment? This paper will examine this question and attempt to explain and provide guidance for airport operations when presented with both situations.

The tools that we have is the bird strike committee and bird strike committees all over the world. So that is what I am going to talk about. The reason this came up is recently when these drone incidents over at Gatwick and I think Dubai had one and there was another one where a drone was spotted in the area and they shut the airport down. Gatwick, I think, was closed for 2-3 days. My question to the bird strike committees, mainly Bird Strike Committee USA (BSC-USA)-Weller, but also to the Australians – you will close an airport for 3 days for a 1 kg drone, yet seemingly you do nothing for a flock of geese that are around your airport at all times. Where is the difference? I think it is a mindset of safety and security and I will talk more about that with the drone thing. Interestingly enough those of you in the states when you go through TSA it says for your safety all this stuff is required. I saw that and I thought, wait a minute, as a safety officer that is not for my safety, it is for my security – it is for everybody's security. Yes ultimately it is for our safety because safety is keeping us from harm, but it is for our security not our safety. I think that this delusion between the lines is causing some of this.

I will talk more about that in a second, but first of all, who am I? To quote Admiral Stockdale, “who am I, why am I here?” I kind of wear three hats. First of all I am a pilot and I have been a pilot for over 40 years in all kinds of grounds. I started off in

general aviation, went into the military and flew C5s for 28 years. Then I went out and bankrupted three different airlines, flew corporate, went back to the airlines, back and forth and while I was with the airline I joined the union safety group. Kind of my love of flying led me into safety to protect airplanes and people. I joined the safety organization with ALPA first then in the military I got involved with safety. My mentor right here, Dave Moore, who was my chief of safety. And then I went through all the safety stuff with the air force. Got involved in the BASH program at Westhover, ran it for a while. Went to my first bird strike meeting in Vancouver in 2005. When I was there it was interesting because I was one of the few pilots there. Of course most of the time at these meetings the pilots that come are the military pilots because they are in charge doing what I was doing. As I sat through the presentations I realized –okay- it is biologists and airport people talking about biology and airports and pilots are here and you are affecting what us pilots do but we really don't have a say in it. So it drove my desire to become more involved. So I became involved in the BSC-USA. When I was flying corporate aviation I joined NBAA which is the National Business Aviation Association. Their safety committee, I started a bird strike working group to educate our pilots, business aviation pilots, about the threats of birds and wildlife to take it up to the people who actually deal with it every day. It was

fairly well received. That led me to the World Birdstrike Association (WBA). I went to the first meeting in Stavanger,¹ and have been to every meeting ever since. I was on the board for the last 6 years and at the last meeting in Poland I was elected president of the WBA.

So as president of the WBA and as the WBA we attempt to represent all bird strike committees throughout the world. We seek to make things better for everyone. We work for the bird strike committees.

Three different hats. Who do you bird strike committees represent? As a pilot I can tell you, more than 50% of the pilots I fly with don't even know you exist. The ones that do know you exist have no idea what you do. In fact I had one pilot say "isn't Sully the president of the BSC-USA? And I said, "no, that is totally different, he won't even deal with this", but that is a separate issue.

We have an image problem. People don't know who we are and what we do. We need to do a better job of that. As a safety officer I understand what you do. Risk management. It is great because you are here identifying hazards and managing risks using the risk management approach. Of course as the WBA being part of this group we represent all the bird strike – we work for you. We represent you in things throughout the globe. We try to make things better for everybody.

What you do? I understand what you do. I have been involved. Pilots don't understand what you do. They don't even know you exist. I put that for Weller since his comment yesterday about "bear enemas". I just don't – bad image. As a pilot we don't really understand.

¹ Editors note: This meeting was actually a meeting of the International Bird Strike Committee, not the WBA

Interesting story. I was flying out of Providence, Rhode Island, one morning. Taxi out. Foggy day. A few of you know Rhode Island because the fog and the runway was warm so the seagulls were sitting on the runway. As we were pulling up to take off, I called to the tower and said "hey, you got some seagulls out here on the runway and an airplane was on final". Well, he didn't send it around right away and I said this is going to be interesting. I waited about 30 seconds. Finally he sent the airplane around. Out came the airport operations guy. Meanwhile I told my passenger in the back "we got to wait for take-off, there's some birds out here". I was flying with my co-pilot. She was sitting there. We were talking about it. Out comes the airport ops. They jump out of the truck, they grab a shotgun and "boom, boom, boom, boom". And they blow away about six of the ten birds. My co-pilot screams "oh my god, I can't believe they just killed them". The guy in the back went "well that was very interesting". And I kind of was like went well that's interesting. Later I went to the airport ops and I said "okay, I appreciate what you do because I can guarantee that the ones that lived and left weren't coming back, but the image". I can't imagine if that was a Delta airplane with 200 people on board and the captain says "ladies and gentlemen, we are waiting for these birds to be cleared" and now you have all these people on iphones taking pictures. Again, my co-pilot got a real big education on what you do and unfortunately most of the press sees what you do this last ditch effort of depredation, but they don't see all the other stuff, the hard work that you do.

We need to get the word out to pilots and everybody out there about what we do. As the WBA we fully understand what you do and we want to help you do what you do better.

That said, another story. Pilot of American Airlines. We land LA, we touch down. As we are touching down a small bird flies right over the top of the cockpit. I said “hmm, I wonder if we hit that bird?” The captain said, “nope, we didn’t hit that bird.” And I said “well, I’m not sure he was pretty close.” Even that, the bow wave of the airplane – and we all understand how the air forces work on these small birds. So we pull off and I just called the tower. I said, “Tower, I think we just hit a bird on the runway” and the captain looks at me and says “what the hell are you doing?” And I said “I am reporting the bird strike.” He says “well now have to do all the paperwork”. I didn’t want to take the time to educate him on this is what the FAA Advisory Circular says what a bird strike is – the presence of birds or wildlife on or off the airport that has a significant effect. A near miss – that is a significant effect to me. He has to spend 5 minutes filling out a report doing other things. I will get to more about that and pilots and what we do, but I tell you that because I want to tell you this. This is what we do. This is our requirements at American Airlines. It is very vague. In the event of a possible suspected bird strike that is what you have to write up in the maintenance. So we have these procedures, but as we all know more than 50% of bird strikes go unreported. We need to do a better job at getting the word out.

From an operations perspective as a pilot we are very lacking. We need SOPs. When I was in corporate aviation we came up with our own SOPs for birds and wildlife mitigation. We have this thing called NADP1 and NADP2. I don’t even know what it stands for – departure procedures basically. One gets you away from the ground quick, the other not so quick. If you think the threat or the hazard, the risk of hitting birds is higher than normal, we all know where the birds are, get away from the

ground quicker. We put that as a standard operating procedure in our flight department. That is the nice thing about having a small flight department of four airplanes and 18 pilots is you can do that. I can say this is our new procedure and this is what we are doing. For an airline with 14,000 pilots you can’t just do that and when you do it what is the reason behind it, do we really need to do this. Bird strikes are not a problem and most of the pilots I talk to – it is an act of god you really can’t do anything about it so why are we doing this, there is nothing we can do. SOPs, that is something we can come up with, do a better job.

NOTAMS. This was in Australia. I use this when I talk to pilots. I am a FAST Team rep, FAA and I go out and do these presentations on bird strikes trying to educate pilots on the importance of reporting and all that. I use this as an example and I think we should try to do this in the states, all over the world. The WBA supports things like this.

At Cairns Airport they have the flying fox issue. It is a NOTAM. Pilots, first, it is another NOTAM, I’ve got to read it, but when you read it you understand what the flying fox is, its behaviours, where it is. On page 2 it shows a map of the airport and it shows between 10 o’clock at night and two in the morning this is where we see these flying foxes. And it is at one end of the runway. As a pilot using my risk-based decision-making I think if it is calm winds and I can land and take-off any way I want maybe I want to land, if it is at this end of the runway, I want to land on this end of the runway and take-off on that to avoid the area where they know they are. Not to say I won’t hit any, but at least I am using good risk-based decision-making in doing something like that.

That is one good thing. The other good thing is as an American pilot I fly down to

Australia and they say something about a flying fox. What the heck is a flying fox. We don't have those in the states. If I had this NOTAM I would be educated on it. Even though it is not for Sydney, I went into Sydney and they say something about flying foxes I know because I read this NOTAM before. So it is a good tool to use and it shows that the airport is identifying hazards and helps pilots make a better risk decision.

Another thing – Jeppesen pages. If we can get information to Jeppesen pages. This is interesting. I didn't realize that weather radar helped keep birds away, but this airport seems to think that it does so it advises pilots to turn their radar on. But that is all it says. What about where the threats are? What I would like to see is what are your top three. All of you airport people know what your top three threats are. Put them down here. Deer, gulls, sparrows and the time of year they are. I would like to know that.

Second. If I have a bird strike in Balogna, Italy, I know because I am involved in this group that as a US registered aircraft I am supposed to fill out the FAA form and report it to the FAA. What about the Italians? Where do I go? I call the tower and say "hey, I had a bird strike." They say "okay" and if they understand English to start with – a lot of times the English translation is lost in a lot of these things – so put down here in case of a bird strike go to this website, call this number. We need to do globally a much better job of educating pilots. Give us the tools that we can use.

Also, those countries where pilot reporting is mandatory, I can guarantee you that 90% of the pilots that fly internationally at my airline do not know which countries that reporting is mandated in. So they are violating the air rules of that country. We need to get that word out to everybody.

ATIS. I think you heard me - use caution birds in the vicinity – the biggest waste. You talk to every pilot that I fly with it is the biggest waste. Ten o'clock at night, use caution birds in the vicinity. My question to the tower is, I used to do this, I don't anymore because it has wasted 5 seconds of my life, "you are reporting birds."

"Yes, we put that on the ATIS."

"Well, why do you put it?"

"Because they are always here."

I said "it is ten o'clock at night, it is pitch black, how do you know there's birds here?"

"They are always here."

"Well, what are you going to do about it?"

"We just have to warn you."

The bottom line - if you hit a bird and it says "were you warned about birds in the vicinity" – yes, click, now we are done, our liability is done we don't have to worry about that. We need to change this and change it drastically. As a pilot I need to know about are there gulls – gulls on the southeast side of the runway, one-third of a mile off. Whatever it is. One thing about Providence. They have this on the ATIS, but it is in a NOTAM and we are only going to put it on the ATIS if a pilot reports it or tower sees it. If the pilots that fly take time to read that NOTAM then they understand and they know to ask tower, but the pilots that don't they go all around the country and hear birds in the vicinity use caution – oh it is just another ATIS that tells me nothing. Crying wolf and it needs to change. The WBA supports changing this. Giving pilots more information.

Training, The AAWHG, the Australians, they do an outstanding job. I was just down there last month for their annual meeting. They are trying to get training for airport personnel mandated by the administrator – by their FAA – CASA. Training for airport

personnel, training for biologists, training for pilots. So when you get a pilot's license you are going to take 30 minutes and you are going to learn about bird behaviour and bird strikes and what to do in case of a bird strike. And then when you go back for your recurrent training or whatever semi-annual training or whatever it is we are going to spend 10 minutes talking about bird strikes and this is the latest incidents, accidents that we have seen. Something you can learn. They even went to the point of wanting pilots to understand about bird behaviour. Understand that certain birds take off into the wind, certain birds take off away from the wind. And I was like that is way too much for pilots to know. Just understand that if there are birds near the runway to not land. So again, training, we can do a much better job.

Reporting, accident investigations, all these things actually can and should be included in ICAO annexes. Annex 13, accident investigation. Gee just happened this morning. Do you think that the Russian authority is going to start this accident investigation this morning and they are going to open Annex 13 that tells then how to do an accident investigation and when it comes to bird strikes there is a big fat nothing. The fact that you need to analyze wildlife hazard management plan at the airport. Where did the strike take place – within 5 km of the airport? Below 3000 feet? The airport is responsible. What about the airport wildlife hazard management plan? Have they implemented it? Do they do a good job of it? Are you going to investigate that? Nothing is outlined. What kind of bird it is. A lot of times they will do these accident investigations and they will say the airplane struck a bird. Airplane crashed. What kind of bird, we don't know. It need to be outlined in Annex 13, we need to work better with ICAO. And that at the WBA is what we are trying to do, but we

need the support of all the bird strike committees throughout the world.

I think we heard this saying “if we continue to do the same things we are going to get the same results.” Since 2005 I have come to these meetings. I learned about neophytes, endophytes, nephrophytes, the grasses, the hawks, the deterrents, this, that, but I still hear on the ATIS “use caution birds in the vicinity.” I still hear air traffic control very hesitant to do anything about it. Pilots that I fly with are not educated about this. Hopefully we are going to change all that, and hopefully it can start now.

Back to my original thing. The drones. What I was talking about. These drones are coming and I have been very interested in this since they have announced their explosion and they have come on the scene. Because my thing as a pilot understanding that we fly by the rules. The ultimate rule is that pilots avoid things. I am going to see and I am going to avoid. How do these things see and avoid? This has a camera but it is not 360, you can't move around. These I don't know. But their solution is sense and avoid. Let's sense and avoid. Their whole thing is geared towards traffic. Let's not hit other airplanes. So if we use ADSB, if we use TCAS, all that stuff, we can sense other airplanes. And, of course being the bird-nerd that I am, what about birds and wildlife? How are you going to avoid those? “Oh, well, we are just going to sense them.”

I think we have all seen that video of hawks attacking drones and the drone falls on a playground. Luckily no kids were there. But I think, truly, when these things come on the scene we are going to have incidents, accidents. Those are going to happen. That exact scenario is going to happen. A bird attacks a drone. It is going to fall down hurt, injured, kill somebody. Then the questions are going to start being raised. We need to

be ready as a bird strike group to say “look, what are we doing about this?”

I contacted Amazon as a representative of BSC-USA. I basically was told, “we are not worried about it. That is not a problem.” One thing as a group we should understand – the money behind these, the research and development that is going into these – if they do have that incident where a bird attacks and it crashes, they are going to put the money into some sort of a sensory platform to sense birds. If you can do that in a drone, let’s put it in a cockpit and let’s use it for aircraft. So we can get good stuff out of this and hopefully we will.

The other thing – Uber air taxi. Anybody hear about this? Dallas, down at Melbourne and one other city in the states. So obviously the AAWHG in Australia, the BSC-USA, I called them up as a representative of the WBA and I talked to John Weller and Jackson in Australia and I said “we need to write a letter about this because my question is okay are these aircraft are they certified?” They are going to be carrying passengers. Are they certified under Part 125 or Part 25 I think it is. Can they withstand a 4 lb bird in the window? Can the engine ingest a 4 to 6 lb bird and still fly? The answer I got from the UAVSI which is the unmanned aircraft organization said “they are going to use helicopters and they are going to use helicopter standards at first.” I thought that was interesting, but which ones? So we are going to be carrying people in these airplanes that are not certified to withstand bird strikes.

Second of all, when we operate, as you all know, at an airport with people we have to have a wildlife management plan within boundaries of the airport. Who is going to do a wildlife management plan for the city of Dallas? Are they going to do one? And when a Uber air taxi crashes and kills people they are going to say “it hit a bird” because

these airplanes are going to be flying 300 ft and below. Birds all around. It is going to be a very interesting thing. But personally, pilot, whatever, I think the nuisance factor of these. People are going to get sick and tired of these things flying over their heads and that is going to be the death of these. But we will see.

But anyway, as the WBA, we support a common sense approach to stuff like this especially when it comes to bird and wildlife mitigations. So following the crash of a Cessna 525 in Oklahoma City, I remember Larry O’Higgins commented about this. 1549. Now I guess we have the new US Airways – the Russian 1549 today. But it is going to happen and when people die things are going to change. We as a bird strike committee, we need to be ready when the legislators come down and say “okay, everybody, when there is a bird spotted within 5 miles of an airport we are going to cease operations.” We all understand that that is not plausible or feasible. We shouldn’t do stuff like that. If we have an approach to say this is what we do, this is how we do it – give us more power on the airports to do what you want us to do and use a common sense approach I think we can all do better.²

² Slide presentation, if any, was not provided by the author.

