

13 April 2017

Subject: Guidelines on the usage of drones in public open spaces and other JCPZ depots and facilities

1. Purpose:

Technological advancement has resulted in various gadgets and 'toys' available on the market. One of the gadgets includes the drones for private usage by residents and individuals. The usage of drones is still a debatable topic within the Aviation industry. Hence, the need for a discussion on the position of the organisation, guidelines on the necessary protocols as well as the legal parameters for flying drones in public open spaces.

2. Introduction

It should be highlighted that drones are regulated through Aviation Laws before anyone can allow the usage of facilities and in consideration of potential impacts on conservation and complaints from surrounding property owners. Thus the key issues for consideration include the question on who will bears the ultimate responsibility of liability should a drone injure a person or causes damage the property.

The South African Civil Aviation Authority (SACAA) views any drone flying in the sky as an aircraft and must abide by the same law as manned aircraft. As a commercial pilot, a commercial drone pilot must also go through their own certification and exams. The first step would be getting your Remote Pilots License (RPL), second would be your Air Service License (ASL) from the Department of Transport and then the Remote Operators Certificate (ROC) from the SACAA. Only once you have these certificates can you operate commercially. For anyone even considering commercial drone work or needing inflight drone insurance your RPL is a must have!

SACAA has collaborated with the drone industry and formulated regulations, now referred to as Remotely Piloted Aircraft Systems (RPAS), to deal with this rapidly expanding industry. The law addresses the main issues of safety and security when using drones and the correct way to classify them. These regulations can be found in Part 101 of the South African Civil Aviation Regulations and they came into force on 1 July 2015.

3. Definitions:

- "Remotely piloted aircraft" (RPAS) means an unmanned aircraft which is piloted from a remote pilot station, excluding model aircraft and toy aircraft.
- "Toy aircraft" means a product falling under the definition of aircraft which is designed or intended for use in play by children.
- "Model aircraft" means a non-human-carrying aircraft capable of sustained flight in the atmosphere and used exclusively for air display, recreational use, sport or competitions.

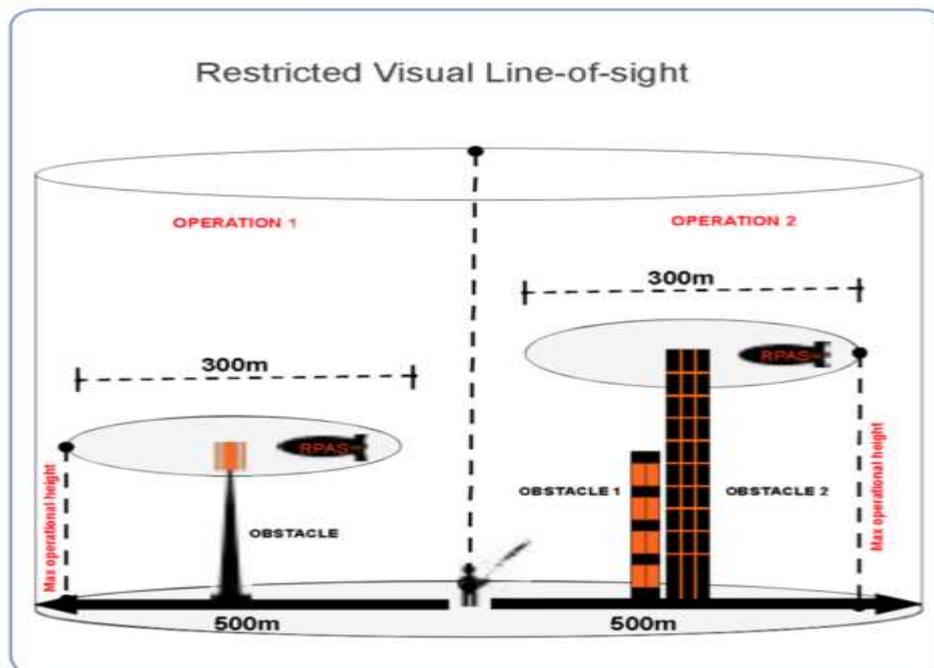
4. Regulations interpretation:

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For RPAS, you will either be operating under Hobby laws (Private use) or commercial laws. Private use or Hobby laws can be termed as follows by the CAA: For private operation, RPAS may only be used for an individual's personal and private purposes where there is no commercial outcome, interest or gain.

5. Hobby laws/Private use Flight rules are as follows:

- Aerodromes – Not allowed to fly 10Km within airport, Helipad or Airstrip.
- Weather Conditions – Operate RPAS in daylight and clear weather conditions.
- Intoxication – Do not operate RPAS while intoxicated.
- Class of RPA – Class 1A or 1B (Mass <7KG)
- RPA Vicinity – Do not operate within 50m or closer to any person, property or public road.



6. Rules of Flight for private/hobby use:

Restricted Visual Line-of-sight (R-VLOS) which means an operation within 500m of the remote pilot and below the height of the highest obstacle within 300m of the RPA, in which the remote pilot maintains direct unaided visual contact with the RPA to manage its flight and meet separation and collision avoidance responsibilities.

7. Operating commercially:

Getting a Remote Pilots License (RPL) does not entitle a person to operate commercially just yet. It's the first step forward in developing a licensed drone pilot with the right knowledge, flight skills and most importantly understanding the safety elements involved when flying within manned airspace.



8. Acceptable uses of RPAS:

For private use –

- (a) The RPAS may only be used for an individual's personal and private purposes where there is no commercial outcome, interest or gain;
- (b) The pilot must observe all statutory requirements relating to liability, privacy and any other laws enforceable by any other authorities.

For all other use –

- (a) an RPA must be registered and may only be operated in terms of Part 101 of the South African Civil Aviation Regulations.

Dangers of negligent operation of an RPA: Collision with other aircraft, with possible fatal results in:

- Collision with other aircraft, with possible fatal results
- Injury to the public
- Damage to people's property
- Legal liability for breaking laws such as privacy by-laws and other laws enforceable by other authorities.

9. Interpretation of the rules in accordance with part 101 of Civil Aviation regulations:

1. You need to have a CAA approved and valid remote pilot licence as well as a letter of approval to operate the drone.
2. The letter of approval will be valid for 12 months. While you do not need to have these documents when buying a drone, the seller will have to make you aware of the requirements as stipulated in the SACAA regulations.
3. Drones cannot fly more than 400ft or 120m above the ground, nor within in 10km of an aerodrome.
4. Drones cannot be flown within 50m above or close to a person or crowd of people, structure or building – without prior SACAA approval. Nor can you fly drones adjacent to or above a nuclear power plant, prison, police station, a crime scene, court of law, and national key points.
5. The rules do apply to toy aircraft or unmanned free balloons or other types of aircraft which cannot be managed on a real-time basis during flight.
6. You cannot use a public road for the take-off or landing of a drone.
7. You cannot use a drone in adverse weather conditions, where your view of the drone is obstructed since visual contact must be maintained with the RPA by the operator – unless in approved beyond visual line of sight or night operations.
8. Drones need to give way to all manned aircraft and should avoid passing over, under or in front of manned aircraft, unless it passes well clear and takes into account the effect of aircraft wake turbulence.
9. RPA pilots will be required to tune into the air traffic services for the controlled airspace they will be flying the drone, reporting co-ordinates to said traffic controllers – all flight activity also needs to be recorded in a logbook.
10. Drones cannot be used to transport cargo or make deliveries



11. Drones cannot tow another aircraft, perform aerial or aerobatic displays or be flown in formation or swarm;
12. All incidents involving an RPA must be reported, especially where there is any injury to a person; damage to property; or destruction of the RPA beyond economical repair.

10. Impact on the environment:

Flying of drones is banned from Yosemite National Park in California for negative impact on environment and safety. The Park Service cited several negative impacts that drones have on Yosemite, which ranged from making an impact the natural soundscape to creating an environment that is not conducive to wilderness travel.

The use of drones also interferes with emergency rescue operations and can cause confusion and distraction for rescue personnel and other parties involved in the rescue operation. Additionally, drones can have negative impacts on wildlife nearby the area of use, especially sensitive nesting sites.

One of the limitations of drones is that they cause massive distress to the birds. A local example is provided in Roodepoort reported by a resident in March 2017 that - plovers try to dive bomb a drone that was hovering over a nesting site and one of them end up getting severely injured; the heron leaves the site and the Egyptian Geese go mad in fear; the Hadedas also tried to attack the drones flying too close to them.

11. Recommendations:

- 1) Flying of drones in public open spaces is prohibited in terms of the Public Open Space By-Laws.
- 2) City Parks does not have designated areas for flying drones since public open space are accessible by the communities and the activity poses a danger to park users.
- 3) Drones are dangerous and permission to engage in this activity must also be obtained from the Aviation authority and a clear statement of intent/objectives/outcomes outlined.
- 4) The usage of drones as a hobby or for recreation purposes within public open spaces is not permitted nor supported.
- 5) City Parks, as the land custodian on behalf of the City through Johannesburg Property Company, should also give permission to use public open spaces, under exceptional circumstances and if deemed necessary for scientific research purposes only within a controlled and restricted environment, and in partnership/collaboration with a research institution.
- 6) Enforcement undertaking should a drone be observed in a public open space, enforcement of By-laws in conjunction with JMPD.

Therefore, current signage and notices will require an amendment to include that the flying of drones and model aircraft is prohibited within public open spaces.



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The Director of Civil Aviation has designated an external organisation to oversee the operations of recreational aviation. For more information on the operation of model aircraft, please contact the South African Model Aircraft Association (SAAMA), www.samaa.org.za.

The full details of the CAA Aviation regulations related to RPAS Part 101 can be found on www.caa.co.za.

For further information:

<http://www.caa.co.za/Pages/RPAS/Remotely%20Piloted%20Aircraft%20Systems.aspx>

http://www.salon.com/2014/05/05/drones_banned_from_yosemite_national_park_for_negative_impact_on_environment_and_safety/

<http://www.gcint.org/drones-dangerous-for-humans-and-the-environment/>

<https://www.michalsons.com/blog/drone-law-in-south-africa/16543>

<https://mybroadband.co.za/news/gadgets/126654-12-things-you-need-to-know-about-south-africas-new-drone-laws.html>

<https://www.actiongear.co.za/blogs/guides/getting-your-drone-license-the-laws-explained>

<http://www.caa.co.za/Documents/RPAS/Part%20101%20-%20RPAS%20Workshops.pdf>

https://www.washingtonpost.com/news/energy-environment/wp/2015/08/13/drones-could-be-stressing-out-wildlife-scientists-suggest/?utm_term=.51826048b1c7

<http://www.caa.co.za/Legal%20Documents/SA-CATS%20101%20approval.pdf>

<http://www.ee.co.za/wp-content/uploads/2015/08/Sonet-Kock.pdf>

http://e360.yale.edu/features/interview_lian_pin_koh_how_drones_are_emerging_as_valuable_conservation_tool

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