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OPERATION OF REMOTELY OPERATED AIRCRAFT

The Purpose of this AIC is to provide the legal requirement for the operation of Remotely Piloted Aircraft within the Republic of Botswana.

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Proposed Regulations for Privately Operated Remotely Piloted Aircraft (RPA)

1. Purpose

The purposes of these regulations are not to restrict people’s enjoyment of RPA’s. However it has become evident that RPA can impact the safety, security and privacy of both government and public interests. These regulations have become a requirement due to the occasional irresponsible use of RPA. These Regulations apply to the operation of RPA for Private use only, with a MAUW of 20kg and are limited to Visual-Line-Of-Sight (VLOS) operations. These regulations do not apply to model aircraft.

TYPE OF OPERATIONS	LINE-OF-SIGHT	MAX SPEED (KNTS)	MAX ALTITUDE (FT AGL)	MTOW (KG)
PRIVATE	VISUAL-LINE-OF-SIGHT	90	400	20

2. General

- (1) The RPA shall not be flown unless the Operator is present.
- (2) The Operator will at all times maintain visual line-of-sight (VLOS) with the RPA. This will be accomplished unaided by any device other than corrective lenses.
- (3) RPA will be flown below 400 ft AGL at all times and no further than 500m from the Operator at the controls of the RPA
- (4) The Operator may make use of a Visual Observer (VO)
- (5) The Operator or the VO may not fly more than one RPA at any one time
- (6) The RPA registered in Botswana is not permitted to cross International Boundaries
- (7) No person shall operate an RPA unless they have in their possession the certificate of registration for each RPA in operation and the user manual for the RPA.

3. Definitions

For the purposes of this Part, unless the context otherwise indicates, the following definitions shall apply –

“authority” means The Civil Aviation Authority of Botswana

“background check” means the checking of a person’s identity and previous experience, including any criminal history as part of the assessment of an individual’s suitability to implement a security control and/or for unescorted access to a security restricted area;

“model aircraft” means a non-human-carrying aircraft capable of sustained flight in the atmosphere and used exclusively for air display, recreational, sport or competition activity;

“observer” means a trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight;

“operator” means the person who is operating the controls of, or supervising the person operating the controls of RPA.

“payload” includes all elements of an RPAS that are not necessary for flight but that are carried for the purpose of fulfilling specific mission objectives;

“private operation” means the use of an RPA for an individual’s personal and private purposes where there is no commercial outcome, interest or gain;

“remote pilot station” means the station at which the remote pilot manages the flight of the remotely piloted aircraft;

“remotely piloted aircraft” means an unmanned aircraft which is piloted from a remote pilot station, excluding model aircraft and toy aircraft as defined in this Part;

“remotely piloted aircraft system” means a set of configurable elements consisting of a remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other system elements as may be required at any point during flight operation;

“visual line-of-sight” means an operation below 400 ft AGL in which the Operator maintains direct and unaided visual contact with the remotely piloted aircraft at a distance not exceeding 500 m

4. Abbreviations

For the purpose of this regulations, the following abbreviations shall apply –

- AGL** - means above ground level
- MTOM**- means maximum take-off mass
- C of R**- means Certificate of Registration for RPA
- RPA** - means remotely piloted aircraft
- RPAS** - means remotely piloted aircraft system
- RPL** - means a remote pilot licence
- RPS** - means remote pilot station
- VLOS** - means visual line of sight.
- VO** - means visual observer

5. Registration

- (1) The RPA will be registered with the Authority and a numbered certificate of use will be issued upon receipt of a fee as prescribed in Regulation 20.
- (2) This certificate will name, contact information and address of the operator/s
- (3) When operating a RPA, the operator shall have his certificate available for inspection
- (4) The operator shall make available to the Authority, upon request, the RPA for inspection or testing, and any associated documents or records.

- (5) The RPA shall not be lent, sold or leased without the authorization of the Authority.
- (6) The Operator/s will be citizens or residents of the Republic of Botswana.
- (7) The Operator will be issued with an AIP and a copy of these regulations at their expense.
- (8) The Authority shall obtain a clearance certificate for the Operator from both Botswana Police and D.I.S. as part of a background check.
- (9) Should non-citizens or non-residents wish to bring an RPA into Botswana for the purpose of flying it within the country, they should apply to the Authority in writing giving 7 days' notice.

6. Age Restrictions

- (1) The operator shall be 18 years of age or older

7. Duties of the Operator

- (1) The Operator is accountable for safe operation of the RPAS.
- (2) The Operator of an RPA shall, on each flight, operate such aircraft in accordance with the manual, unless an unforeseen emergency dictates otherwise.
- (3) The Operator of an RPA is responsible for separation and avoidance of the RPA from other aircraft and any other obstacles and hazards.
- (4) The configuration of the RPA will not under any circumstances be changed from its original configuration without the specific approval of the Authority.

8. Precautions and safety considerations

- (1) No person shall operate an RPAS unless –
 - a. The RPA is in a fit-to-fly condition;
 - b. The remotely piloted aircraft station is compatible and interoperable with the RPA it is connected to in all phases of flight; and
 - c. The RPA is being controlled by only one RPS at any given moment in time.
- (2) No person shall operate an RPA in a negligent or reckless manner so as to endanger the safety of any person, property or other aircraft in the air or on the ground.
- (3) The operator shall use the services of a VO if the RPA is being flown using the first person view camera (FPV) or at any time the operator cannot maintain visual contact for whatever reason. The use of the VO in these circumstances is to satisfy the see and avoid requirement.

9. Pre-flight preparation

- (1) An RPA operator shall complete the pre-flight preparations prior to each flight, and ensure that the RPA is serviceable and capable of flight as per the manufacturer's standards and specifications.

10. Flight operations

- (1) The RPAS shall be operated in such a way that appropriate separation from other aircraft is maintained and that adequate obstacle clearance is ensured, during all phases of the flight.
- (2) The Operator of an RPA shall ensure that the take-off and landing area is safe and of the appropriate dimensions.

11. RESTRICTED AREAS OF OPERATION

- 1) All controlled airspace unless with the specific permission of the relevant ATC authority and then only if two way communication with that authority can be maintained.
- 2) Within a 3km radius of an unmanned airfield unless the operator can monitor the unmanned airfields frequency of 125.5 MHz.
- 3) All national game parks and wild life sanctuaries.
- 4) Over any tourism facility (hotels, lodges and campsites etc.).
- 5) Over any wildlife in a manner in which the RPA will disturb such wildlife.
- 6) No RPA shall be flown within a lateral distance of 200m from any Power Line
- 7) No Botswana registered RPA may fly across an international boundary.
- 8) All prohibited and restricted airspace noted in the AIP (Aeronautical Information Publication).
- 9) Take-off, land or fly over any major public roads
- 10) Over any moving vehicular traffic
- 11) An RPA may not be flown adjacent to or above a prison, police station, crime scene, court of law, and Government facilities including, military and security installations.
- 12) Over any private property unless with the specific permission of the owner.

13) Over built up areas.

14) Over public gatherings or in any way that might cause injury to people or damage to property on the ground should the RPA suffer a failure

15) If special permission is required, for the purposes of aerial work, to overfly any of the above mentioned areas, permission must be requested from the CAAB or the relevant authority, in writing, giving the following details:-

- a. Certificate of registration number for the RPA
- b. Date and time of proposed flight of RPA
- c. Reason for proposed flight of RP

12. Accidents and Incidents

- (1) All accidents and incidents involving an RPA must be reported within 10 days, where there is –
 - a. Any injury to a third party person;
 - b. Damage to third party property; or
 - c. Destruction of the RPA beyond economical repair requiring deregistration of the RPA.

13. Right of way

- (1) An RPA shall give way to manned aircraft.
- (2) The RPA shall not pass over, under or in front of any manned aircraft.
- (3) When two RPAs are approaching head-on or approximately so and there is danger of collision, each aircraft shall alter its heading to the right.
- (4) When two RPA's are converging at approximately the same level, the RPA which has the other RPA on its right, shall give way,
- (5) An RPA which is being overtaken has the right-of-way, and the one overtaking shall alter its heading to keep well clear

14. Night operations

- (1) An RPA may not be flown at night.

15. Visual line-of-sight

- (1) No person shall operate an RPA in weather conditions that do not allow unobstructed visual contact to be maintained with the RPA by other airspace users and by the operator.
- (2) Operations to be conducted below 400 ft AGL
- (3) The Operator shall maintain direct and unaided visual contact with the RPA at a distance not exceeding 500 m
- (4) Visual contact shall be maintained unaided by any device other than corrective lenses.

- (5) The Operator may use an Observer but this is not requirement.
- (6) The Operator may use the first-person view camera (FPV) to fly the RPA, but then an Observer will be required to satisfy the “see-and-avoid” requirement.

16. Consumption of alcohol and drugs

- (1) No Operator or Observer shall
 - a. Consume alcohol or any psychoactive substance during the operation of the RPA
 - c. Operate an RPA while under the influence of alcohol or any psychoactive substance having a narcotic effect.

17. Carriage of Payload, Cargo and Dangerous goods

- (1) The RPA will not be used to carry any load other than, that it was originally intended as per the manufactures design specifications
- (2) No RPA shall carry dangerous goods as cargo.

18. Releasing object or substance

- (1) No object or substance shall be released, dispensed, dropped, delivered or deployed from an RPA. except by the holder of an ROC and as approved by the Authority in the Operations Manual

19 Penalties

- (1) The penalty or infringing any of the above regulations will be a maximum of BWP 5,000 and/or confiscation of the RPA
- (2) In the event the RPA is used in the commission of any crime the maximum penalty shall be BWP 50,000 and/or 2 years imprisonment and/or confiscation of the RPA

20. Fees

- (1) Fee for Registration and issuance of a Certificate of Registration to a successful applicant in accordance with Regulation

This circular becomes effective immediately.