Volume 1A – Domestic RPAS (BVLOS Operations) Supplement

(Cooperative Republic of Guyana)

Part A – Regulations (Beyond Visual Line of Sight Operations)

GUYANA – Civil Aviation (Remotely Piloted Aircraft Systems – BVLOS Operations) Regulations 2025
Made under the Civil Aviation Act (Act No. 21 of 2018)

IN EXERCISE OF the powers conferred by Section 140(1) of the Civil Aviation Act 2018, the Minister responsible for civil aviation hereby makes the following Regulations:

Arrangement of Regulations

1. Citation

1.1 These Regulations may be cited as the **Civil Aviation (RPAS Beyond Visual Line of Sight Operations) Regulations 2025** and shall be read as a supplement (Volume 1A) to the Domestic RPAS Regulations (Volume 1).

2. Interpretation

2.1 Terms used in Volume 1A have the same meanings as defined in Volume 1 of the Domestic RPAS Regulations, unless otherwise specified. In addition, for the purposes of these Regulations:

- **"Beyond Visual Line-of-Sight (BVLOS) Operation"** means an RPAS operation in which the remote pilot cannot maintain direct, unaided visual contact with the RPA to manage its flight and meet separation and collision avoidance responsibilities.

- This is contrasted with **"Visual Line-of-Sight (VLOS) Operation,"** which means an operation in which the remote crew maintains direct visual contact with the aircraft to manage its flight and avoid collisions.

- **“Visual Observer”** means a person designated by the operator to assist the remote pilot in detecting and avoiding other air traffic or obstacles by maintaining visual line-of-sight with the RPA during BVLOS operations.

- **“Command and Control (C2) Link”** means the communication link between the RPA and the Remote Pilot Station, allowing control of the aircraft during flight (GCAA, 2025)[4].

- **“Communication, Navigation and Surveillance (CNS) Capability Declaration”** means a document provided by an operator, detailing the RPAS’s communication systems, navigation performance, and surveillance equipment/capabilities for a proposed BVLOS operation, including any redundancies or fail-safe features (GCAA, 2025).

- **Weight Classifications:**

  “**Micro RPA**” means an RPA with a maximum take-off mass (MTOM) of 0.1 kg (100 g) or less;
  “**Very Small RPA**” means an RPA with MTOM over 100 g up to 2 kg;
  “**Small RPA**” means MTOM over 2 kg up to 25 kg;
  “**Medium RPA**” means MTOM over 25 kg up to 150 kg; and
  “**Large RPA**” means MTOM greater than 150 kg

  These weight categories are as defined in Volume 1 of the Domestic RPAS Regulations and are used to determine certain BVLOS requirements based on risk.

2.2 All other terms and phrases in Volume 1A shall be interpreted in accordance with their definitions in Volume 1 and in the context of applicable ICAO Standards and Recommended Practices.

3.1 Operations Covered

3.1.1 These Regulations apply to all **Beyond Visual Line-of-Sight (BVLOS)** operations of Remotely Piloted Aircraft (RPA) conducted within the sovereign airspace of Guyana, whether for recreational, commercial, or State purposes.

3.1.2 These provisions supplement the general RPAS requirements in **Volume 1** and establish specific standards for BVLOS operations.

3.2 Weight Threshold

3.2.1 Except where specifically exempted, any RPA with a **Maximum Take-Off Mass (MTOM) greater than 0.1 kg (100 g)** that is operated beyond visual line-of-sight is subject to these Regulations.

3.2.2 RPAS ≤ 100 g MTOM are generally exempt under Volume 1, unless:

(a) equipped for surveillance, data capture, or sensitive payloads, or
(b) operated in a manner deemed hazardous to aviation safety or public safety.

3.2.3 No person shall operate a Micro RPA (≤ 100 g) BVLOS for surveillance or other sensitive purposes without full compliance with these Regulations.

3.3 Territorial Scope

3.3.1 These Regulations apply to **domestic BVLOS operations within Guyana's Flight Information Region (FIR)**.

3.3.2 BVLOS operations conducted across international borders or outside Guyana are not covered under Volume 1A and shall require **separate authorization** in accordance with international standards (ICAO, 2024).

3.4 Relationship to Other Regulations

3.4.1 Compliance with this Volume 1A is required in addition to all provisions of Volume 1 (Domestic RPAS Regulations).

3.4.2 Where provisions conflict, the more restrictive requirement — particularly those specific to BVLOS in this Volume — shall apply.

3.4.3 Nothing in these Regulations removes the obligation to comply with the **Civil Aviation**

Act or any other applicable national laws, including those on airspace, privacy, or environmental protection.

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4. General Requirement for BVLOS Authorization

4.1 Prohibition without Approval

4.1.1 No person or organization shall operate an RPA beyond visual line-of-sight without **prior written authorization** from the Guyana Civil Aviation Authority (GCAA).

4.1.2 Unauthorized BVLOS operations are unlawful and subject to enforcement action (§13).

4.1.3 Each BVLOS operation, or category of operation, must be individually assessed and approved by the GCAA.

4.2 Application Process

4.2.1 To obtain BVLOS authorization, the applicant shall submit a **BVLOS Operation Application** to the GCAA.

4.2.2 The application shall include, at minimum:

(a) RPA make/model and weight category
(b) Proposed area and altitude of operations (with geocoordinates or map)
(c) Proposed dates, times, or schedule
(d) Purpose of the operation
(e) Remote pilot's qualifications and license details
(f) Proof of liability insurance (if required)
(g) RPA airworthiness documentation
(h) A BVLOS-specific risk assessment (Annex 2)
(i) A completed CNS Capability Declaration (Annex 4)

4.3 Approval Document

4.3.1 If granted, BVLOS authorization will be issued in writing by the GCAA in one of the following forms:

(a) **Specific Operation Approval** or **Letter of Authorization** for one-time or limited operations, or

(b) An **endorsement/appendix** to an RPAS Operator Certificate (ROC) for ongoing or commercial BVLOS operations (§5).

4.3.2 The authorization shall specify operational limits, conditions, and mitigation measures (e.g., route, altitude ceiling, observer requirements).

4.3.3 Operators must strictly adhere to all authorization terms. Any deviation (area, equipment, or procedures) requires prior GCAA approval.

4.4 Validity and Renewal

4.4.1 BVLOS authorizations shall be issued for a defined period or event.

4.4.2 Renewal or re-approval is required for continued operations beyond the validity period or if operational parameters change.

4.4.3 The GCAA may suspend or revoke authorizations in the interest of safety or for non-compliance.

4.5 Integration with Air Traffic Services (ATS)

4.5.1 BVLOS operators shall coordinate with **Air Traffic Control (ATC)** where required.

4.5.2 If the operation enters controlled airspace or an Aerodrome Traffic Zone, separate ATC clearance is mandatory in addition to GCAA approval.

4.5.3 Filing of a **flight plan** with the appropriate ATS unit is required for all BVLOS flights in controlled or international airspace (ICAO, 2024; GCAA, 2025).

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5. Classification by RPA Weight Category

5.1 General Principle

5.1.1 BVLOS operational requirements shall be scaled according to the RPA's weight class (Micro, Very Small, Small, Medium, Large), ensuring a risk-proportionate approach while maintaining consistent safety outcomes.

5.1.2 Heavier RPAs pose greater hazards and are therefore subject to stricter requirements.

5.1.3 All RPA weight classes are subject to the core BVLOS safety provisions of these Regulations; lighter RPAs are not exempt from fundamental BVLOS standards.

5.2 Micro and Very Small RPA (≤ 2 kg)

5.2.1 Due to low mass and limited kinetic energy, BVLOS operations with Micro and Very Small RPAs may be authorized on a case-by-case basis in low-risk environments (e.g., short-range flights in sparsely populated areas).

5.2.2 Operators in this class are not required to hold a RPAS Operator Certificate (ROC) but must obtain a **BVLOS Flight Authorization** from GCAA for each operation or project, supported by a documented risk assessment.

5.2.3 Visual observers are normally required to compensate for limited onboard systems, unless equivalent mitigations are approved.

5.2.4 The GCAA may impose operational constraints, such as:

- Altitude restrictions significantly below 150 m AGL
- Daylight-only operations
- Defined geographical limits

5.3 Small RPA (> 2 kg up to 25 kg)

5.3.1 Small RPAs carry greater kinetic energy and require more robust mitigations and oversight.

5.3.2 Regular (Recreational, commercial or private) BVLOS operations in this category shall generally require an **RPAS Operator Certificate (ROC)**.

5.3.3 The GCAA may authorize one-time or limited BVLOS operations without an ROC if safety is demonstrated (e.g., government agency or research project).

5.3.4 All BVLOS flights in this category must comply with technical, operational, and licensing requirements in these Regulations.

5.3.5 Small RPAs are typically limited to **≤ 150 m (492 ft) AGL**, unless higher altitudes are explicitly authorized with ATC coordination.

5.4 Medium and Large RPA (> 25 kg)

5.4.1 BVLOS operations with Medium and Large RPAs present risks comparable to manned aviation and require the highest level of regulatory control.

5.4.2 Operators shall hold a valid **RPAS Operator Certificate (ROC)** with operations specifications explicitly permitting BVLOS.

5.4.3 Operators shall implement a **Safety Management System (§11)** and maintain a detailed Operations Manual.

5.4.4 The RPA shall have **Type Certification or Airworthiness Approval** in accordance with the applicable GCAA Airworthiness and ICAO Annex 8 standards (ICAO, 2022).

5.4.5 Medium/Large BVLOS flights will typically be conducted in **segregated airspace or under ATC supervision**, especially at altitudes used by manned aircraft.

5.4.6 Additional equipment such as **ADS-B Out or transponders** is mandatory (§7.4).

5.4.7 Higher crew qualifications (e.g., instrument-rated remote pilots or specialized BVLOS training) shall be required for Large RPA operations.

5.5 Consistency Across RPAS Types

5.5.1 The weight-based requirements apply to all RPAS types, including multirotor, fixed-wing, and hybrid VTOL.

5.5.2 RPAs of the same weight class are subject to the same core BVLOS obligations, regardless of configuration.

5.5.3 The GCAA may impose type-specific conditions (e.g., sufficient landing area for fixed-wing; auto-hover failsafe for rotorcraft), but the underlying regulatory requirements remain aligned across RPAS types.

6. Operating Limitations and Airspace

6.1 Maximum Altitude

6.1.1 Except as specifically authorized by the GCAA and Air Traffic Control (ATC), no BVLOS RPA shall be operated above **150 meters (500 feet) above ground level** (ICAO Annex 2, 2024).

6.1.2 Operations above 150 m AGL may be permitted only under explicit BVLOS authorization and typically within reserved or controlled airspace with prior coordination.

6.1.3 In all cases, the operating altitude shall comply with ATC instructions and applicable airspace restrictions.

6.2 Distance from Remote Pilot

6.2.1 BVLOS operations have no fixed maximum distance from the Remote Pilot, provided that communication and positive control are continuously maintained.

6.2.2 The authorized operational range (radius or route length) shall be defined by the GCAA in the BVLOS approval, based on the RPA's performance and available risk mitigations.

6.2.3 The RPA shall remain within the **approved geographical boundaries** of the operation at all times. Any excursion beyond these boundaries shall constitute a violation.

6.2.4 The operator shall define the boundaries in the application (e.g., GPS coordinates, flight plan waypoints).

6.3 Airspace Classification

6.3.1 BVLOS operations are prohibited in controlled airspace (Classes A, C etc.) and Aerodrome Traffic Zones unless specifically coordinated and cleared with the appropriate ATC unit (ICAO Annex 2, 2018).

6.3.2 Where BVLOS flights transit controlled airspace or aerodrome zones, the operator shall obtain an ATC clearance for that portion of flight, and the RPA shall be equipped as required by ATC (e.g., two-way radio, transponder).

6.3.3 In uncontrolled (Class G) airspace, BVLOS operations may occur without ATC clearance, but only with GCAA authorization and compliance with detect-and-avoid measures under §7.3.

6.3.4 BVLOS operations over or within prohibited or restricted areas (e.g., military zones, security-sensitive sites) are forbidden unless special permission has been granted by the relevant authority.

6.3.5 The operator shall review all **NOTAMs and airspace orders** prior to each BVLOS flight.

6.4 Flight Over Populated Areas

6.4.1 BVLOS operations over densely populated or congested areas shall not be conducted unless specifically exempted by the GCAA under stringent safety conditions.

6.4.2 An operator seeking authorization for BVLOS over urban or populated areas shall submit a **safety case** demonstrating robust mitigations (e.g., certified parachute recovery system, sterile airspace).

6.4.3 Even if authorized, the GCAA shall impose minimum overflight altitudes and stand-off distances to protect persons and property on the ground.

6.5 Weather and Daylight

6.5.1 All BVLOS operations shall be conducted in **Visual Meteorological Conditions (VMC) by day**, unless specifically approved by the GCAA (ICAO Annex 2, 2018).

6.5.2 Night or Instrument Meteorological Conditions (IMC) BVLOS flights are prohibited unless the operator demonstrates that:

(a) the RPA is equipped with the required instrumentation, lighting, and DAA technology; and
(b) the Remote Pilot and crew possess appropriate training (e.g., instrument or night operations qualifications).

6.5.3 For every BVLOS flight, the Remote Pilot shall obtain and evaluate **weather forecasts** for the operational area, including winds aloft, visibility, ceilings, and convective activity.

6.5.4 If observed or forecast conditions exceed the RPA's weather limitations, or if see-and-avoid capability is degraded, the operation shall be delayed or canceled.

6.5.5 Operators shall maintain predefined **weather contingency procedures** (§7.6), including emergency landing or termination protocols for unexpected weather deterioration.

6.6 Environmental Conditions

6.6.1 BVLOS operations shall only be conducted within the **environmental limits** for which the RPA is designed or certified.

6.6.2 Operations are prohibited in known icing conditions, heavy precipitation, extreme winds, or other hazardous phenomena unless the RPA is specifically certified for such conditions.

6.6.3 BVLOS operations are prohibited during thunderstorms, lightning activity, or geomagnetic storms that may impair GNSS functionality, unless expressly approved by the GCAA.

6.6.4 The Remote Pilot is responsible for reviewing **all relevant meteorological and solar activity data** prior to flight.

6.7 Separation from Other Aircraft

6.7.1 The Remote Pilot-in-Command (RPIC) shall maintain safe separation from all other aircraft in accordance with ICAO Rules of the Air (Annex 2, 2024).

6.7.2 Because the RPIC cannot visually observe the RPA during BVLOS operations, alternate means of detection and separation (§7.3) shall be employed.

6.7.3 When ATC provides separation services, the RPIC shall comply with all ATC instructions.

6.7.4 In uncontrolled airspace, if a potential conflict with a manned aircraft is detected, the RPIC shall:

(a) yield right-of-way immediately; and
(b) take evasive action, including terminating the RPA flight if necessary.

6.7.5 BVLOS flight plans should minimize conflict by using altitudes and areas unlikely to be used by low-flying manned aircraft (e.g., below 120 m AGL in remote areas, or higher only in areas distant from known VFR routes).

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7. Technical and Equipment Requirements

7.1 **Command & Control (C2) Link Performance:**

7.1.1 Every RPA conducting BVLOS operations **shall maintain a continuous and reliable C2 link** between the aircraft and the Remote Pilot Station.

Note: This ensures uninterrupted positive control of the RPA at all times (ICAO Annex 10, 2020).

7.1.2 The C2 link **shall provide sufficient range and signal integrity** to support the entire intended flight envelope.
Note: The link must be capable of maintaining control throughout the operational area without degradation of signal quality.

7.1.3 BVLOS operations **shall employ redundant C2 capabilities**, including at minimum:

(a) a primary terrestrial data link; and
(b) a secondary backup link (e.g., satellite or alternate frequency) capable of assuming control in the event of primary link failure.
Note: Redundancy mitigates the risk of loss of control in the event the primary link is compromised

7.1.4 The operator **shall disclose C2 link characteristics** in the CNS Capability Declaration (Annex 4) and **shall demonstrate compliance with national spectrum licensing requirements**.
Note: This enables the Authority to verify that frequencies are lawfully assigned and suitable for aviation use.

7.1.5 In the event of C2 link loss, the RPA **shall execute automatic mitigation measures** as specified in §7.6, supported by pre-planned pilot-in-command procedures.
Note: Fail-safe programming and operator contingency procedures are essential to ensuring safe recovery or termination of the flight.

7.1.6 All communications equipment **shall meet aviation-grade standards** appropriate to the scope of operation. For extended-range BVLOS, this includes approved aviation transceivers or SATCOM systems meeting ICAO Annex 10 data link provisions.
Note: Certified or aviation-standard equipment ensures system reliability, interoperability, and safety.

7.2 Navigation Systems

7.2.1 Every RPA conducting BVLOS operations **shall be equipped with navigation systems capable of determining and controlling position and altitude with sufficient accuracy.**

7.2.2 At a minimum, the RPA **shall carry an onboard Global Navigation Satellite System (GNSS) receiver** (GPS or equivalent).

7.2.3 For operations in complex airspace or on pre-defined routes, the navigation system **shall meet Performance-Based Navigation (PBN) accuracy requirements** applicable to the airspace classification (ICAO Annex 10, 2018).

Note: Medium and Large RPAs conducting IFR-like or international operations must comply with ICAO PBN requirements, including Required Navigation Performance (RNP) specifications.

7.2.4 The RPA **shall be capable of recording GNSS flight track data** for post-flight analysis.

7.2.5 Where applicable, the RPA **shall employ geo-fencing software or pre-programmed flight routes** to ensure containment within authorized airspace and to avoid prohibited areas.

7.2.6 The navigation system **shall interface with failsafe protocols**, such that in the event of a lost C2 link the RPA executes the designated lost-link procedure (see §7.6).

7.3 Detect and Avoid (DAA) and Electronic Surveillance

7.3.1 Every RPAS engaged in BVLOS operations **shall incorporate alternative means of detect-and-avoid (DAA)** to achieve an equivalent level of safety to manned see-and-avoid (ICAO Annex 6, Part IV, 2024).

7.3.2 Acceptable DAA measures may include one or more of the following:

(a) **Visual Observers.** Strategic placement of trained visual observers with continuous line-of-sight to the RPA, maintaining radio communication with the Remote Pilot-in-Command (RPIC) to report potential conflicts (GCAA, 2025).

(b) **Electronic Surveillance.** Carriage of airborne surveillance equipment, including but not limited to:

- **ADS-B Out or Transponders.**

- Medium and Large RPAs shall carry ADS-B Out (1090 MHz ES or UAT) or a Mode C/S transponder, enabling ATC detection and TCAS resolution.

- Small RPAs conducting BVLOS in remote, uncontrolled airspace may be authorized to use alternate systems (e.g., ADS-B 978 MHz UAT or smaller broadcast modules) as approved by the GCAA.

- Micro and Very Small RPAs may be exempted from ADS-B requirements if operating in areas/altitudes of minimal risk. However, where controlled traffic is present, **all RPAs, regardless of size, shall broadcast position information.**

- The operator shall declare details of the chosen surveillance device in the CNS Capability Declaration and shall ensure its use on all BVLOS flights.

- **Other Sensors.** Radar, lidar-based DAA systems, or traffic-information service data links may be used, integrated to provide alerts to the RPIC or to enable autonomous avoidance maneuvers within pre-set limits.

(c) **Altitude and Route Restrictions.** Confinement of BVLOS operations to pre-defined corridors or altitudes where manned aircraft are not expected, with publication of such activity by NOTAM wherererequired.

Note: For example, small BVLOS operations may be restricted to altitudes below 120 m AGL in remote areas.

7.3.3 The operator **shall document the selected DAA and surveillance measures** in the operations manual and risk assessment and obtain GCAA approval as part of the BVLOS authorization.

7.3.4 Where an operator intends to rely solely on electronic DAA technology without observers, the operator **shall provide evidence of its reliability and effectiveness.**

7.3.5 Regardless of the DAA measures employed, the **RPIC retains ultimate responsibility for collision avoidance.** If conflicting traffic is detected, the RPIC **shall give way and/or terminate the flight** to prevent conflict.

7.4 Telemetry and Tracking

7.4.1 Every RPAS conducting BVLOS operations **shall continuously transmit telemetry data** to the Remote Pilot Station during flight.

7.4.2 Telemetry transmissions **shall include, at minimum:**

- GPS position,
- Altitude, and
- Aircraft status.

7.4.3 All telemetry data **shall be logged for post-flight review.**

7.4.4 The GCAA may require operators to provide real-time access to telemetry or tracking feeds for oversight purposes, including integration with a national UAS Traffic Management (UTM) system when available.

7.5 Remote Pilot Station (RPS) Requirements

7.5.1 The Remote Pilot Station (RPS) used for BVLOS operations **shall meet basic airworthiness, safety, and human-factors requirements** (ICAO Annex 8, 2022).

7.5.2 The RPS **shall be equipped with a redundant power supply**, such as a battery backup or generator, to prevent loss of control during flight.

7.5.3 The RPS **shall display to the Remote Pilot all critical flight information** required for safe operation without direct visual contact with the RPA, including but not limited to:

- Attitude
- Altitude
- Position
- Link status
- Power source/battery or fuel status

7.5.4 Where multiple RPAs are controlled, or where control is transferred between stations, the operator **shall implement robust handover and transfer-of-control protocols.**

7.5.5 The RPS hardware and software **shall be assessed for reliability and resilience against cyber interference.**

- The operator shall implement cybersecurity measures to protect the C2 link and control station from unauthorized access, hacking, or jamming.

7.5.6 Any software updates or configuration changes to the RPS or autopilot **that may affect BVLOS operation shall be tested and documented** prior to use in live operations.

7.5.7 The RPS equipment and layout **shall comply with applicable GCAA airworthiness criteria or manufacturer specifications.**

Note: For Medium and Large RPAs, a formal RPS airworthiness approval from the GCAA may be required.

7.6 Fail-safe and Emergency Features

7.6.1 All RPAS conducting BVLOS operations **shall incorporate automatic fail-safe features** to address potential failures, including pre-programmed lost-link procedures (GCAA, 2025).

7.6.2 At minimum, upon loss of the C2 link for a sustained period, the RPA shall autonomously execute a predetermined action such as:

(a) **Autonomous Return-to-Home (RTH).** Navigate to a predefined recovery point or loiter area and land or circle until link is re-established.

(b) **Altitude Adjustment.** Climb or descend to a safe preset altitude to avoid terrain and known traffic before executing recovery.

(c) **Flight Termination.** Where RTH is not feasible or safe, autonomously descend in a minimal-risk manner (e.g., controlled parachute deployment at a geo-fenced site).

7.6.3 The selected fail-safe actions **shall be appropriate to the operation** and clearly described in the operator's BVLOS application.

7.6.4 In controlled airspace, the Remote Pilot **shall immediately notify ATC** when a lost-link event occurs, and the RPA is executing autonomous recovery (ICAO Annex 2, 2018).

7.6.5 The RPIC and any visual observers **shall maintain and carry an Emergency/Contingency Plan** addressing potential failure, including loss of link, loss of GPS, engine failure, fly-away, or other emergencies.

7.6.6 The RPIC **shall terminate the flight manually** at the first indication of impending system failure, where feasible (e.g., using an intentional flight termination command).

7.6.7 Operators **shall coordinate with local authorities for emergency response** in the event of an RPA accident, including securing wreckage to support safety investigation (see §12).

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8. Remote Pilot and Personnel Requirements

8.1 Remote Pilot Licensing

8.1.1 Any person acting as the Remote Pilot-in-Command (RPIC) for a BVLOS operation **shall hold a valid license or certificate** appropriate for operating an RPA in beyond-visual-line-of-sight conditions, as required under the Civil Aviation (Personnel Licensing) Regulations of Guyana.

8.1.2 At minimum, the RPIC **shall hold a Remote Pilot Licence (RPL) or equivalent permit** with ratings or endorsements for BVLOS operations.

8.1.3 The GCAA shall specify the required license category and any special authorization (e.g., Instrument Rating (RPAS) for IMC operations, if applicable).

8.1.4 The RPIC **shall carry proof of licensing** during operations.

Reference (ICAO Annex 1)

8.2 Training and Competency

8.2.1 The operator **shall ensure that all personnel involved in BVLOS operations are trained and competent** for their assigned duties (ICAO Annex 6, Part IV, 2024).

8.2.2 BVLOS-specific training for remote pilots shall include, at minimum:
(a) extended flight operations,
(b) use of long-range communications,
(c) interpretation of sensor data and telemetry in lieu of direct vision, and
(d) emergency procedures for lost-link and abnormal events.

8.2.3 Remote pilots shall have practiced simulated or live BVLOS scenarios before conducting operational flights.

8.2.4 Visual Observers, where used, shall be trained in:

(a) scanning techniques,
(b) communication protocols with the RPIC,

(c) recognition of manned aircraft, and
(d) familiarization with the RPA’s performance and flight profile.

8.2.5 A sufficient number of observers shall be deployed such that at least one observer maintains continuous situational awareness of the RPA or surrounding airspace, unless alternative DAA measures are authorized.

8.2.6 Observers shall have reliable two-way communication with the RPIC and a means to instantly relay hold or evade instructions.

8.3 Crew Roles and Coordination

8.3.1 For complex BVLOS operations, the operator **shall designate a remote flight crew** that may include, in addition to the RPIC:

- a sensor operator,
- a systems or flight technician, and
- visual observers.

8.3.2 Crew roles and responsibilities **shall be defined in the operations manual**.

8.3.3 The RPIC retains **final authority and responsibility** for the safety of the operation, equivalent to a Pilot-in-Command of a manned aircraft.

8.3.4 All crew members shall maintain continuous and effective communication.

8.3.5 Where control is transferred between pilots or control stations, **handover procedures shall be practiced and documented** to prevent confusion or loss of control.

8.4 Medical Fitness

8.4.1 Remote pilots and observers **shall meet medical fitness standards** as required by the GCAA.

8.4.2 At minimum, personnel shall have sufficient sensory acuity (visual and auditory), corrected if necessary, to perform their duties.

8.4.3 Where licensing standards require a medical certificate, the RPIC **shall hold a valid certificate of the appropriate class.**

8.5 Duty Time and Fatigue Management

8.5.1 Operators **shall ensure personnel are not fatigued** during BVLOS operations.

8.5.2 Remote pilots shall not operate an RPA for excessively long continuous periods without relief.

8.5.3 For extended or long-duration flights, the operator shall schedule crew changes or breaks.

8.5.4 Medium and Large RPA operations may be subject to duty and rest limitations similar to manned aircraft, where specified by the Authority.

8.6 Prohibition on Substance Use

8.6.1 No crew member (including RPIC, observers, or support personnel) shall participate in BVLOS operations while under the influence of alcohol or psychoactive substances that impair performance (ICAO Annex 1 & Annex 6, 2018).

8.6.2 Operators shall enforce strict **fit-for-duty policies**.
8.6.3 Crew members are subject to the same **drug and alcohol testing requirements** as manned aircraft crews under Guyana’s civil aviation laws.

8.6.4 Violation of this provision shall result in immediate suspension of operations and may incur regulatory penalties (see §13).

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9. Operating Procedures

9.1 Pre-Flight Planning

9.1.1 Comprehensive pre-flight planning is mandatory for all BVLOS flights. The RPIC shall review and plan, at minimum, for:

(a) **Operating Area Survey.** Identify hazards along the route (e.g., terrain, power lines, structures, sensitive sites). Verify the flight remains within approved boundaries.

(b) **Airspace Review.** Determine applicable airspace classes. Check restricted/prohibited areas and temporary restrictions. Obtain necessary clearances.

(c) **Weather Check.** Review forecasts for visibility, winds, cloud cover, and hazards. Delay, reroute, or cancel if conditions exceed operational limits (§6.5–6.6).

(d) **Equipment Check.** Verify RPA airworthiness, maintenance status, battery/fuel levels, GPS reception, C2 link performance, fail-safe functions, and ADS-B/surveillance beacons. Confirm Remote Pilot Station readiness.

(e) **Crew Briefing.** Brief all personnel on roles, procedures, communications, handover protocols, and emergency plans. Confirm observer placement and check-in arrangements.

9.1.2 Operators shall utilize a standardized **Pre-Flight Checklist** (see Annex 3, Part B).

9.1.3 A second person, where available, should independently verify completion of all pre-flight items.

9.2 Flight Plan Submission

9.2.1 For each BVLOS flight, the operator **shall submit a flight plan or equivalent notification** to the GCAA and/or ATC, in accordance with authorization conditions and airspace class (ICAO Annex 2 & Annex 6, 2024).

9.2.2 The flight plan shall include, at minimum:

- launch location,

- route waypoints or area of operation,
- planned altitude/flight levels,
- time of operation and duration,
- RPA identification and performance details,
- RPIC contact information,
- lost-link procedures.
  9.2.3 For low-level operations entirely within uncontrolled airspace, the GCAA may permit simplified notification methods (e.g., portal or email submission).
  9.2.4 Flight plans or notifications should be filed at least **24 hours before the planned operation**, unless otherwise directed by the GCAA.

9.3 In-Flight Procedures and Compliance

9.3.1 During BVLOS operations, the RPIC shall operate strictly in accordance with the approved flight plan and authorization conditions.

9.3.2 Deviations are prohibited except when:
(a) necessary for safety (e.g., collision or weather avoidance), or
(b) specifically cleared by ATC.

9.3.3 If the RPA deviates unexpectedly, the RPIC shall:

(a) attempt to correct the deviation or initiate contingency procedures; and
(b) notify GCAA/ATC promptly of the deviation and corrective measures.

9.3.4 The RPIC shall comply with right-of-way rules, yielding to all manned aircraft.

9.3.5 The RPIC shall continuously monitor:

- RPA telemetry, and
- surrounding airspace (via observers or instruments)

9.3.6 Communication shall be maintained as required (e.g., ATC frequency, observer radio).

9.3.7 If instructed by ATC to cease operations or vacate an area, the RPIC shall comply immediately.

9.4 Emergency or Contingency Activation

9.4.1 If an emergency arises (e.g., lost C2 link, loss of power, severe weather, traffic conflict), the RPIC shall execute predefined emergency procedures (§7.6).

9.4.2 Emergency measures may include activating autonomous recovery (Return-to-Home) or manually terminating flight.

9.4.3 The RPIC shall, where possible, broadcast emergency status to ATC, nearby traffic, and observers.

9.4.4 Significant incidents shall be reported to the GCAA in accordance with §12.

9.4.5 Observers are authorized to instruct the RPIC to take evasive action or abort flight when imminent hazards are detected.

9.5 Post-Flight Procedures

9.5.1 After BVLOS flight completion, the operator shall:

(a) conduct a **post-flight inspection** for any damage or anomalies,
(b) retain and review flight data (telemetry logs, GPS tracks, system performance),
(c) document abnormal events (e.g., link loss, fail-safes, avoidance maneuvers),
(d) collect observer reports and ATC feedback,
(e) convene a crew debrief for lessons learned.

9.5.2 Significant incidents or abnormal events shall be reported to the GCAA in accordance with §12.

9.5.3 All documentation (flight plans, authorizations, logs, reports) shall be retained by the operator for the period specified by the GCAA, not less than 12 months.

10. Documentation and Record-Keeping

10.1 Operational Manual

10.1.1 All BVLOS operators shall maintain an RPAS Operational Manual, or a BVLOS appendix to an existing manual.

10.1.2 The manual shall describe operational procedures, risk mitigations, training, maintenance, and contingency plans.

10.1.3 The GCAA may require submission of the manual (or excerpts) during the approval process, particularly for ROC holders.

10.1.4 The manual must be updated to reflect new technologies, regulatory changes, and lessons learned from operations.

10.2 Maintenance and Airworthiness Records

10.2.1 Operators shall maintain records demonstrating continuing airworthiness of RPAs and components used in BVLOS flights.

10.2.2 Records shall include: maintenance logs, repair history, firmware/software updates, battery usage records, and certification documents (for Medium/Large RPAs).

10.2.3 Required inspections shall be current before each BVLOS flight.

10.2.4 Any modification affecting performance must be evaluated, documented, and, where required, reported to the GCAA.

10.2.5 The GCAA reserves the right to audit maintenance records at any time.

10.3 Flight Logs

10.3.1 A flight log shall be completed for each BVLOS flight.

10.3.2 Each log shall include: date, time, duration, route/area flown, RPIC and crew, RPA serial number, significant events, and checklist completion.

10.3.3 Multiple sorties on the same day must each be logged.

10.3.4 Logs must be available for GCAA inspection on request.

10.4 Incident Reports

10.4.1 All incidents and abnormal occurrences (e.g., lost link, airspace violation, near-collision, ground damage) shall be documented in an internal report.

10.4.2 Operators shall analyze reports, identify root causes, and implement corrective actions.

10.4.3 Reports shall be submitted to the GCAA in accordance with §12.2.

10.5 Documentation Retention

10.5.1 Operators shall retain all BVLOS-related records (e.g., flight plans, logs, maintenance, training, incident reports) for at least **two (2) years**, unless otherwise directed by the GCAA.

10.5.2 Digital records are acceptable if securely stored and backed up.

10.6 Availability to Authority

10.6.1 All documentation shall be made available to the GCAA upon request.

10.6.2 Inspectors may conduct audits or require reports to verify compliance.

10.6.3 Obstructing GCAA oversight, including denial of access to records or sites, is a regulatory offense (§13.3).

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11. Safety Management

11.1 Safety Management System (SMS)

11.1.1 Operators conducting regular or complex BVLOS operations (particularly ROC holders) shall implement an SMS in accordance with ICAO Annex 19.

11.1.2 The SMS shall be proportionate to the scale of operations and include:

(a) **Risk Management** – Hazard identification, risk assessment, and mitigation prior to operations or significant changes.

(b) **Safety Assurance** – Monitoring safety performance, investigating anomalies, conducting audits, and corrective actions.

(c) **Safety Promotion** – Training, communication, and just culture to encourage reporting and learning.

11.1.3 The GCAA may require SMS summaries or safety cases as part of BVLOS authorization.

11.1.4 Smaller operators must still demonstrate an equivalent proactive safety approach (e.g., documented risk assessments and contingency plans).

11.2 Continuous Improvement

11.2.1 Operators shall review and update risk assessments, manuals, and procedures to reflect new risks, technologies, or lessons learned.

11.2.2 Material changes affecting the basis of approval shall be communicated to the GCAA.

11.3 Emergency Response Plan (ERP)

11.3.1 Operators shall maintain an ERP covering accidents and incidents, including:

- Immediate crew actions
- Emergency services notification
- Preservation of data and evidence
- GCAA and authority notifications
  11.3.2 All crew shall be trained in their ERP responsibilities.

11.4 Quality Assurance

11.4.1 Operators shall maintain QA processes to verify BVLOS procedures, training, and maintenance remain effective and compliant.

11.4.2 Procedures must be updated to reflect changes to ICAO or GCAA standards.

11.4.3 The GCAA may review SMS/QA effectiveness as part of surveillance activities.

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12. Incident and Accident Reporting

12.1 Mandatory Reporting to GCAA

12.1.1 Operators shall report all BVLOS accidents, serious incidents, and notifiable occurrences in line with ICAO Annex 13 and national law.

12.1.2 Reporting timelines:

(a) **Accidents** – Notify GCAA immediately (fastest means, e.g., telephone/radio) and submit a written report within 24 hours. Secure the site; preserve wreckage unless moved to assist injured persons or prevent further harm.

(b) **Serious Incidents** – Notify GCAA as soon as practicable; submit written report within 72 hours. Examples include: near mid-air collision, fly-away into unauthorized airspace, collision with structure.

(c) **Other Incidents** – Report within 3 days. Includes lost link requiring fail-safe, unauthorized airspace entry, emergency activation, or equipment failure compromising safety.

12.1.3 Written reports shall include: date/time, location, RPA ID, occurrence description, crew actions, and outcome. Supporting data (logs, telemetry, video) must be preserved and submitted upon request.

12.2 Investigation and Follow-up

12.2.1 The GCAA will investigate occurrences in line with Annex 13 and national requirements.

12.2.2 Operators and crew must cooperate fully, including providing personnel, records, and evidence.

12.2.3 The GCAA may suspend BVLOS operations pending investigation if a serious hazard is suspected.

12.3 Corrective Actions

12.3.1 Operators shall implement corrective and preventive measures following any incident.

12.3.2 The GCAA may require submission of a corrective action plan.

12.3.3 Enforcement action may be taken for negligence or violations, independent of investigation outcomes.

12.4 Recording and Analysis

12.4.1 Operators shall maintain internal records of all incidents and analyze them for safety trends.

12.4.2 Lessons learned shall be communicated to crew and, where appropriate, shared with the GCAA.

12.4.3 The GCAA may issue advisories or recommendations to the RPAS community based on incident data, consistent with Annex 19 safety information-sharing principles.

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13. Enforcement and Penalties

13.1 Offenses

13.1.1 It is an offense to breach any provision of these BVLOS Regulations or any condition attached to a BVLOS authorization.

13.1.2 Specific offenses include, but are not limited to:

(a) Operating BVLOS without prior GCAA authorization.

(b) Exceeding authorized limits, such as altitude, geographic area, or operating conditions.

(c) Falsifying, omitting, or failing to maintain required documentation or records.

(d) Obstructing, interfering with, or failing to cooperate with GCAA inspections or investigations.

(e) Failing to comply with ATC instructions or conducting reckless or negligent operations.

13.1.3 General operator obligations under the Civil Aviation Act and Volume 1 (Domestic RPAS Regulations) apply equally to BVLOS operations.

13.2 Penalties

13.2.1 Upon summary conviction, penalties may include:

(a) **Monetary Fine:** As prescribed by the Civil Aviation Act or regulations. Fines may be higher for organizations or repeat offenders.
(b) **Imprisonment:** For serious violations endangering life or property, imprisonment not exceeding twelve (12) months may be imposed.
(c) **Forfeiture/Detention:** The GCAA may detain or seize the RPA, its control station, and associated equipment used in an offense. Confiscation may be ordered by the court.
(d) **License/Certificate Action:** The GCAA may suspend or revoke a Remote Pilot Licence (RPL), BVLOS authorization, or RPAS Operator Certificate (ROC) for unsafe practices or breaches.

13.2.2 Penalties under these Regulations are in addition to any other sanctions under national laws.

13.2.3 Each day of a continuing violation may constitute a separate offense.

13.3 Enforcement and Inspections

13.3.1 The GCAA is empowered to enforce these Regulations. Authorized inspectors may conduct unannounced audits, inspections, or tests of BVLOS operations, personnel, equipment, and records.

13.3.2 Inspectors may issue findings, require corrective actions, or order suspension of operations where safety concerns are identified.

13.3.3 In urgent safety cases, a GCAA inspector or ATC official may order immediate cessation of a BVLOS flight or activity. Failure to comply constitutes a serious offense.

13.4 Appeals

13.4.1 Any person aggrieved by a decision of the GCAA under these Regulations, including denial of authorization or suspension/revocation of a license or certificate, may appeal or request review under the Civil Aviation Act.

13.4.2 An appeal does not automatically stay the GCAA's decision unless so ordered by the appellate authority.

13.5 Liability

13.5.1 Compliance with these Regulations does not relieve an operator or remote pilot of liability for harm or damage caused by their operation.

13.5.2 Operators are strongly advised to maintain adequate insurance coverage for BVLOS operations, including third-party and public liability.

13.5.3 Proof of insurance may be required by the GCAA as a condition of BVLOS authorization.

13.6 Other Laws

13.6.1 These Regulations operate in addition to, and not in substitution for, any other applicable laws of Guyana.

13.6.2 Violations of other laws (e.g., Telecommunications Act, Cybercrime Act, privacy or data protection laws) may result in additional penalties separate from aviation enforcement.

(End of Part A – Regulations)

Part B – Requirements and Guidance Material

Status of This Section

This Part B is issued by the Guyana Civil Aviation Authority (GCAA) to accompany the binding provisions set out in **Part A of Volume 1A – BVLOS Regulations**.

1. **Legal Effect**
   - The provisions in **Part A** are *legally binding requirements*. Operators must comply with them at all times.
   - The material in **Part B** does **not** create additional legal obligations. Instead, it provides **acceptable means of compliance (AMC)** and **guidance material (GM)** to help operators demonstrate adherence to the requirements in Part A.

2. **Use of Guidance**

    - Unless otherwise approved by the GCAA, operators are expected to follow the methods described in Part B.

    - Where an operator proposes an alternative method, they must demonstrate to the GCAA that the alternative achieves an equivalent or higher level of safety.

3. **Updates**

    - Part B may be revised periodically to reflect new technology, operational practices, or international standards (e.g., ICAO Annexes, JARUS guidance). Operators are responsible for ensuring they are using the most recent version of this material when planning BVLOS operations.

4. **Purpose**

    - This section provides context, rationale, and practical examples. Its purpose is to support operators in preparing applications, developing procedures, and safely conducting BVLOS flights in compliance with the binding regulatory framework.

B1. Overview of BVLOS Operations

BVLOS (Beyond Visual Line-of-Sight) operations allow RPAS to be flown at greater distances and for advanced use cases such as long-range surveying, infrastructure inspection, delivery services, and wide-area surveillance.

Because the pilot cannot see the aircraft directly, BVLOS introduces higher risks. The objective of BVLOS regulations and oversight is to ensure these risks are managed so that operations remain safe for other airspace users and for people on the ground.

In traditional aviation, pilots rely on *see-and-avoid* and onboard instruments. In BVLOS, situational awareness is achieved through:

- technology (GPS, telemetry, onboard sensors, detect-and-avoid systems), and
- procedures (use of visual observers, reserved or segregated airspace).

Guyana’s BVLOS framework is aligned with ICAO Annex 6 Part IV and other Annexes and incorporates international best practices such as JARUS SORA.

National Context:

Guyana has relatively low volumes of manned air traffic in most areas, but unique challenges exist: limited radar coverage, sudden tropical weather changes, and limited communications infrastructure. BVLOS drones must therefore operate with strong safeguards.

B2. Explanatory Material on Key Requirements

1. **Regulatory Approval & Risk-Based Approach (§4 & §5)**
    - Every BVLOS operation must be individually authorized.
    - Requirements are scaled by weight category (Micro to Large) so that regulation is proportionate to risk.
2. **Operational Limits (Altitude & Airspace) (§6)**
    - General BVLOS ceiling: **150 m (500 ft) AGL**, unless specifically authorized.
    - BVLOS in controlled airspace requires ATC clearance and GCAA approval.
    - Flights over populated areas will only be authorized with stringent mitigations (e.g., certified parachute recovery).
3. **C2 Link Redundancy (§7.1)**
    - Reliable command and control (C2) links are essential.
    - Operators should use dual links (e.g., radio + LTE/satellite) and test them in the intended environment.
    - A clear lost-link procedure must be programmed and documented.
4. **Detect-and-Avoid (DAA) & Observers (§7.3)**
    - Observers remain a primary safety measure in Guyana for small RPAS.
    - Larger or higher-risk operations may require electronic DAA (ADS-B In, radar, lidar, optical sensors).
    - Operators must document how collision avoidance will be achieved and ensure observers are trained and equipped.

5. **ADS-B Out & Surveillance (§7.4)**
    - Medium and Large RPAs must carry ADS-B Out or transponders.
    - Smaller RPAs may use lightweight broadcast modules if approved.
    - Exemptions are only possible in remote/uncontrolled areas with minimal risk.
6. **Remote Pilot Qualifications (§8.1 & §8.2)**
    - BVLOS pilots must hold a valid Remote Pilot Licence (RPL) with BVLOS rating or equivalent.
    - Training must cover navigation, airspace knowledge, risk management, telemetry interpretation, and emergency procedures.
7. **Safety Management (§11)**
    - Operators must implement proactive safety management.
    - For ROC holders: a formal SMS is required (aligned with ICAO Annex 19).
    - For smaller operators: a documented risk assessment and contingency plan is the minimum acceptable.

B3. Operational Guidance for BVLOS Flights

Pre-Flight Preparation

- Submit BVLOS applications **30–60 days in advance**.
- Coordinate with ATC and, where relevant, local communities or landowners.
- Always use written checklists (see Annexes 1 & 3).
- Confirm communications plan with clear terminology.
- Check weather along the *entire route*, not only at launch.

In-Flight Guidance

- Maintain focus on telemetry and link status throughout.
- Observers should provide regular position/traffic reports using agreed phraseology.
- Monitor ADS-B or other traffic feeds if available, but do not rely solely on them.
- Log significant events during the flight for post-operation review.

Post-Flight Guidance

- Conduct crew debriefs and document any anomalies.
- Report occurrences to GCAA as required (§12).
- Review telemetry and performance data to improve future flights.
- Ensure maintenance checks after extended or demanding flights.

B4. Guidance on Specific Scenarios

1. **Linear Inspections (Pipelines, Powerlines)**
    - Use leapfrog observer positioning.
    - Identify emergency landing sites along route.
2. **Border Area Operations**
    - Program geofences with at least 1–2 km buffer inside national boundaries.
    - Any cross-border operations require prior GCAA and foreign authority approval.
3. **Maritime BVLOS**
    - Consider satellite C2 links for over-water operations.
    - Ensure the RPAS is salt-resistant and capable of long-range recovery.
4. **High-Altitude or Long-Endurance Drones**
    - Require ROC, airworthiness certification, and segregated airspace.
    - Treated at the level of manned aviation standards.
5. **Emergency & State Operations**
    - GCAA may grant expedited or standing approvals.
    - Operators must still apply core BVLOS safety practices, even under urgent conditions.

B5. BVLOS Application Process

Applicants should:

1. Obtain **Volume 1A** and latest GCAA forms.
2. Prepare a dossier including:
    - Cover letter and operational proposal.
    - RPAS specifications (including CNS form, Annex 4).
    - Risk Assessment (Annex 2 or SORA methodology).
    - Operations Manual/SOPs.
    - Training and personnel qualifications.
    - Maintenance and airworthiness evidence.
    - Proof of insurance.
    - Any prior experience record.
3. Submit package to GCAA with required fees.
4. Respond to any GCAA queries or requests for demonstration.

5. Operate strictly in accordance with issued authorization.
6. Apply for renewal before expiry, referencing safety record.

B6. Best Practices

- Plan conservatively (leave fuel/battery and range margins).
- Manage human factors (fatigue, workload, communication discipline).
- Employ redundancy (C2, navigation, power).
- Maintain environmental awareness (RF interference, weather).
- Engage with the public responsibly (carry authorizations, wear ID vests).
- Securely manage data and respect privacy.
- Stay updated on regulatory changes and international best practices.

B7. Checklist and Template Annexes

On the following pages, you will find the annexed materials to aid in your BVLOS operations:

- **Annex 1 – BVLOS Application Checklist:** A list of items/documents to include when applying to GCAA for a BVLOS operation approval.
- **Annex 2 – BVLOS Risk Assessment Template:** A structured template to guide hazard identification and risk mitigation planning for a proposed BVLOS operation.
- **Annex 3 – Example Pre-Flight Planning and Checklist Form:** A sample form covering key pre-flight, in-flight, and post-flight checks for BVLOS missions.
- **Annex 4 – Communication, Navigation, Surveillance (CNS) Capability Declaration:** A form for operators to declare their RPAS's technical capabilities (C2 link details, navigation performance, surveillance equipage) to GCAA.

Operators are encouraged to use these templates and modify as needed to fit their specific operations. GCAA may also issue official forms from time to time – always check the GCAA website or contact the RPAS office for the latest forms. Using standardized templates will speed up the approval process and ensure you don't miss critical information.

Annex 1: BVLOS Application Checklist

(to be completed by applicant and submitted with supporting documents)

Section	Field	Operator Entry	Notes/Examples
1. Applicant Information	Name (Individual/Org)	___________	
	Address & Contact	Phone: ___ / Email: ___	
	Responsible Person (if org)	Name/Title: ___________	
2. Operation Details	Description of Operation	___________	Provide full CONOPS
	Purpose	___________	e.g., Pipeline inspection, Delivery
	Location/Area	___________	Attach map with boundaries
	Proposed Dates/Times	___________	e.g., Aug–Sept 2025, 06:00–18:00 hrs
	Visual or Instrument Conditions	Day VMC ☐ / Night ☐ / IMC ☐	Special justification needed for Night/IMC
	Max Range from RPIC	___ km	
	Max Altitude	___ ft AGL	≤ 500 ft unless approved
	Airspace Classification	___________	Class G, D, etc.
	Population/Ground Risk	___________	Open farmland / urban / near crowds
3. RPAS Details	Make & Model	___________	
	Manufacturer	___________	

	Weight Category	Micro / Very Small / Small / Medium / Large	Circle one
	MTOW	___ kg	
	Propulsion & Endurance	___________	e.g., Electric, 45 min
	Performance Limits	Max speed ___ m/s; Ceiling ___ ft; Wind limit ___ m/s	
	Registration No.	___________	Attach certificate if available
	Serial No.	___________	
	Remote Pilot Station (RPS)	___________	Type, manufacturer, software
	Manufacturer's Manual Provided	Yes ☐ / No ☐	Attach BVLOS sections
4. CNS Capabilities	Primary C2 Link	___________	Freq, band, power, range
	Backup C2 Link	___________	LTE, Satcom, etc.
	Navigation Systems	___________	GNSS, RTK, SBAS
	Surveillance Systems	ADS-B Out ☐ / ADS-B In ☐ / Transponder ☐ / Other: ___	
	Detect & Avoid	Visual Observers ☐ / Electronic Sensors ☐	Specify
	Lost Link Procedure	RTH ☐ / Loiter ☐ / Land ☐ / Other: ___	
5. Safety Risk Assessment	Full Document Attached	Yes ☐ / No ☐	Use Annex 2 template
	Hazards Identified	✓ Air collision ✓ Lost link ✓ Fly-away ✓ Ground impact ✓ Other: ___	
	Mitigations Summary	___________	Observers, ADS-B, parachute, etc.
	Residual Risk	___________	Low / Acceptable
	Signed & Dated	___________	By safety responsible person
6. Operational Procedures	Ops Manual/SOP Attached	Yes ☐ / No ☐	ROC reference if applicable
	Pre-flight planning covered?	Yes ☐ / No ☐	
	Launch/recovery procedure covered?	Yes ☐ / No ☐	

	In-flight monitoring covered?	Yes ☐ / No ☐	
	Emergency/contingency covered?	Yes ☐ / No ☐	
	Charts/Diagrams Attached	Yes ☐ / No ☐	Flight routes, observer placement
	ATC Coordination Plan	___________	Phone numbers, procedures
7. Crew & Training	RPIC Name	___________	
	License Type/Number	___________	
	Medical Certificate	Class ___ / Expiry: ___	
	BVLOS Training/Experience	___________	e.g., 200 hrs VLOS, BVLOS course
	Additional Pilots	___________	Names & license numbers
	Visual Observers	___________	Attach training/quals
	Crew Communications	Yes ☐ / No ☐	Radios, cell, callsigns
	Chief Pilot/Ops Manager	___________	If applicable
	Safety Manager	___________	If applicable
8. Maintenance & Airworthiness	RPA Airworthiness Status	___________	New/used, CoA if any
	Maintenance Program	___________	Per manual, every XX hrs
	Recent Maintenance	___________	Date of updates/inspections
	Spares/Redundancy	___________	Backup RPA/parts
	Battery Management	___________	No. of cycles, performance checks
	Pre-flight Inspection Checklist Attached	Yes ☐ / No ☐	(Annex 3)
9. Insurance	Provider & Policy Number	___________	
	Coverage Amount	___________	Attach certificate
	Expiry Date	___________	
	BVLOS Ops Covered?	Yes ☐ / No ☐	Must be explicit
10. Previous Experience (Optional)	Prior Operations	___________	e.g., 50 VLOS, 5 EVLOS
	Previous GCAA Approvals	Ref/date: ___________	
	Incident History	___________	Disclose + lessons learned

11. Attachments Checklist	Map of operation area/route	☐	
	RPA spec sheet/manual	☐	
	CNS Capability Declaration (Annex 4)	☐	
	Risk Assessment (Annex 2)	☐	
	Ops SOP/Manual	☐	
	Pilot license(s)	☐	
	Training certificates	☐	
	Insurance certificate	☐	
	Other documents	___________	
12. Applicant Declaration	Declaration	I declare info is true/correct; will comply with CARs; will not commence ops until GCAA approval.	
	Signature	___________	
	Name & Title	___________	
	Date	___________	

Annex 2: BVLOS Risk Assessment Template

Hazard / Scenario	Possible Consequences	Likelihood	Severity	Mitigations	Residual Risk
1. Loss of C2 Link	Fly-away, crash, airspace violation	Medium (terrain interference possible)	High	- Dual-link setup (2.4 GHz + LTE) - RTH after 5 sec - Route designed for coverage - Observer near hills	Low/Medium
2. Fly-away (GPS/compass error)	Drone strays into populated area/airspace	Low–Medium	High	- Geo-fence - Dual GPS - Compass calibration - Manual kill switch	Medium
3. Airspace Conflict with Manned Aircraft	Mid-air collision, catastrophic loss of life	Medium	Catastrophic	- Alt ≤ 400 ft - 2 observers scanning - ADS-B Out - Listen on aviation freq - NOTAM issued	Medium
4. Technical Failure (propulsion/battery)	Crash on ground or air collision	Low	Medium–High	- Pre-flight checks - Parachute system - Avoid populated areas - Emergency plan (fire/first aid)	Low

5. Weather Hazard (wind/rain)	Drift, uncontrolled crash	Medium	High	- Weather forecast check - Limit flight time - Observer monitors weather - RPA IP-rated - Abort on rain	Low–Medium
6. [Other Hazard]	___________	L/M/H	L/M/H	___________	Residual Risk: ___

Residual Risk Scale: Low / Medium / High. All mitigations must bring risk to "As Low As Reasonably Practicable (ALARP)."

Summary of Risk Assessment

- **High/Unacceptable Risks (Pre-Mitigation):** ___
  (These must be mitigated or the operation redesigned before approval.)
- **Residual Risk Profile (Post-Mitigation):**
  - No remaining **High/Unacceptable risks** ✅
  - Only **Low and Medium risks** remain
  - Overall risk is assessed as **As Low As Reasonably Practicable (ALARP)** (GCAA, 2025).
  - The **highest residual risk** is [Medium] for hazard ___, which is acceptable due to [explain rationale, e.g., "extremely low likelihood and multiple mitigations in place"].
- **Commitment:**
  The operator shall implement all identified mitigations and monitor their effectiveness. Any operational changes or newly identified hazards will trigger a review and update of this assessment.

Prepared by: Name / Title: ___________ Date: ___________
Reviewed/Approved by (if applicable): Name / Title: ___________ Date: ___________

(End of Annex 2 – This signed risk assessment forms part of the application to GCAA and must be retained in the operator's SMS documentation.)

Annex 3: Example Pre-Flight Planning and Checklist Form

BVLOS Mission Checklist (Sample Form)

(Operators may adapt this form. Items marked ★ are especially critical for BVLOS.)

A. Mission Information

Item	Check/Entry	Remarks
Operation Name/ID	___________	
Date	___________	
RPIC (Pilot-in-Command)	___________	License No.: ___________
Observer(s)	___________	Names/callsigns
Other Crew/Assistants	___________	
RPA Make/Model	___________	Registration: ___________
Launch Point (coordinates)	___________	
Landing Point (if different)	___________	
Flight Area/Route Description	___________	
Flight Plan filed with ATC?	☐ Yes ☐ No ☐ N/A	Flight Plan ID / ATC Unit: ___________
NOTAMs Issued/Checked?	☐ Yes ☐ No	NOTAM ID(s): ___________

B. Weather Briefing

Item	Check/Entry	Remarks
Forecast window (time)	___________	Source: GCAA Met Office / METAR/TAF
Surface Wind	___________	dir/spd
Winds Aloft	___________	at operating altitude
Visibility	___________	
Cloud Cover	___________	
Ceiling	___________	ft
Temperature	___________	°C
Pressure (QNH)	___________	hPa / inHg
Weather Hazards	☐ None ☐ Yes	If yes → Details: ___________
Go/No-Go Decision ★	☐ GO ☐ NO-GO	Reason: ___________
Decision made by RPIC	___________	Time: ___________

C. Airspace & Ground Risk

Item	Check/Entry	Remarks

Airspace Class	___________	Controlled D, Uncontrolled G, etc.
Nearby Aerodromes	___________	Name/distance
ATC Contacted?	☐ Yes ☐ No	If within CTR/CZ
Planned Altitude (AGL)	___________ ft	<150 m? ☐ Yes ☐ No
Clearance above 150 m?	☐ Yes ☐ No	Attach copy if applicable
Population Density	☐ Sparse ☐ Moderate ☐ Dense	
Mitigation for People	___________	
Prohibited/Restricted Areas	☐ None ☐ Yes	Details: ___________
Approval Obtained (if req.)	☐ Yes ☐ No	Attach evidence

D. Pre-Flight Equipment Checks

RPA (Drone)

Item	Check/Entry	Remarks
Frame & Propellers ★	☐ Pass ☐ Fail	Secure, no cracks
Motors/Engines	☐ Pass ☐ Fail	Normal spin/start
Battery ★	%: ___ Voltage: ___	Health OK
Fuel (if applicable)	___________	Level/pressure
Payload	☐ Pass ☐ Fail	Secure, lens clean
Landing Gear	☐ Pass ☐ Fail	Functional
Lights	☐ Pass ☐ Fail	Nav/strobe ON
Control Surfaces	☐ Pass ☐ Fail	Fixed-wing only
Parachute/Failsafe ★	☐ Armed ☐ N/A	Tested

Avionics & Systems

Item	Check/Entry	Remarks
Flight Controller	☐ Pass ☐ Fail	Self-test OK
Firmware Status	Ver: ___	No warnings
GPS Lock ★	___ sats / HDOP ___	Home point set
Compass Calibration	☐ Done ☐ N/A	
IMU Calibration	☐ Done ☐ N/A	
Geofence Programmed	☐ Yes ☐ No	Boundary: ___ Alt: ___ ft
Mission Plan Loaded	☐ Yes ☐ No	Route checked
Failsafe Settings ★	RTH alt: ___ ft	Timeout: ___ sec

Telemetry Link ★	☐ Stable ☐ Unstable	Signal ___%
Control Link	☐ OK	Arm/disarm works
Video Link	☐ OK ☐ N/A	Freq: ___ / Ch: ___

Communications

Item	Check/Entry	Remarks
Primary C2 Link ★	Type: ___	Range test ___ m
Secondary C2 Link ★	Type: ___	Tested
Frequency Deconfliction	☐ Clear	Spectrum scan done
ATC Radio (if req.)	___ MHz	Check volume/squelch
Crew Intercom	☐ Loud/Clear	Pilot ↔ Observer

Ground Control Station (GCS)

Item	Check/Entry	Remarks
Power Source ★	Battery ___% / Ext.	Backup available
Software	Ver: ___	Mission loaded
Map Data	☐ Loaded	Airspace overlay OK
Failsafe Override ★	☐ Tested	RTL/Terminate ack
System Clock	☐ Synced	

Surveillance & DAA

Item	Check/Entry	Remarks
ADS-B Receiver	☐ ON ☐ N/A	Test with traffic
ADS-B Transmitter ★	☐ ON	Hex code correct
Other Sensors	☐ OK	Radar/lidar (specify)
Observer Equipment	☐ Ready	Binoculars, vest, radio
Observer FOV	☐ Clear	Position optimal

Personnel

Item	Check/Entry	Remarks
RPIC Fit for Duty ★	☐ Yes	Rested, no alcohol/drugs
Observer Briefing	☐ Done	Plan, sectors, phrases
Team Briefing ★	☐ Done	Roles, emergencies

Emergency Contact List	☐ Available	ATC, GCAA, EMS, police

Launch Area

Item	Check/Entry	Remarks
Site Secure	☐ Yes	Cordon in place
Surface Wind	___ dir / ___ spd	Windsock checked
Final Go/No-Go Poll ★	☐ GO ☐ NO-GO	Crew consensus

E. In-Flight Monitoring

Item	Check/Entry	Remarks
Takeoff Time	___ UTC/Local	
Initial Climb	☐ OK ☐ Issue	Notes: ___________
Telemetry Monitoring	Alt ___ / Speed ___ / Batt ___%	At checkpoints
Observer Reports	___________	E.g., "10:05 LT – Aircraft 2 NM E at 1000 ft"
ATC Instructions	___________	
Link Status	☐ Stable ☐ Lost	Details: ___________
Deviations	☐ None ☐ Yes	Corrective action: ___________
Mid-Mission Battery Check	___%	Continue ☐ / RTB ☐
Payload Status	☐ OK ☐ Issue	Notes: ___________

F. Post-Flight Checklist

Item	Check/Entry	Remarks
Landing Time	___ UTC/Local	
Landing Outcome	☐ Normal ☐ Parachute ☐ Hard ☐ Crash	
RPA Status	☐ No Damage ☐ Damage	Notes: ___________
Battery Remaining	___%	Abnormal cells? ☐ Yes ☐ No
Data Logs ★	☐ Saved	Filename/ID: ___________
Flight Termination Used	☐ No ☐ Yes	Details: ___________
Post-Flight Inspection	☐ OK	Props/motors/frame secure

Power Down	☐ Done	RPA / GCS / ADS-B OFF
Crew Debrief	☐ Done	Issues discussed
Incident Report	☐ N/A ☐ Filed	GCAA per §12
Flight Logbook Entry	☐ Completed	
Maintenance Required	☐ No ☐ Yes	Actions: __________

Comments/Lessons Learned:

Pilot in Command Signature: __ Date: _
Observer Signature (if required): _____ (to verify they kept visual, etc.)

(End of Annex 3 – This form should be retained for each BVLOS flight as part of operational records. It ensures systematic adherence to procedures and provides a record for oversight.)

Annex 4: Communication, Navigation, Surveillance (CNS) Capability Declaration

RPAS CNS Capability Declaration (BVLOS Application Form)

(to be completed by Operator/Organization and submitted to GCAA)

Operator Information

Field	Operator Entry	Notes/Examples
Operator/Organization	___________	Company/individual name
RPA Make/Model	___________	e.g., DJI Matrice 350
Serial/ID	___________	Manufacturer serial no.
Weight Category	Micro / Very Small / Small / Medium / Large	Circle/underline one

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A. Communication (C2) Systems

Field	Operator Entry	Notes/Examples
1. Primary Control Link Type	Analog ☐ / Digital ☐	e.g., 2.4 GHz digital
2. Frequency Band	___________	2.4 GHz, 915 MHz
3. Transmission Power	___________ W	EIRP if known
4. Modulation/Protocol	___________	FHSS, LTE, etc.
5. Range in BVLOS	___________ km	Tested in ops area
6. Antennas	Ground: ___; Airborne: ___	Type & dBi gain
7. Expected Latency	___________ ms	Round-trip delay
8. Link Encryption	Yes ☐ / No ☐	Type (AES, WPA2, etc.)
9. Frequency Licensed?	Yes ☐ / No ☐	License ref no.
10. Secondary/Emergency Link	Satcom ☐ / LTE ☐ / Other: ___	Backup C2 system
11. Provider/Network	___________	e.g., Digicel LTE
12. Failover Mechanism	Auto ☐ / Manual ☐	Auto after ___ s
13. Failover Tested?	Yes ☐ / No ☐	Describe results
14. Backup Link Range	___________	e.g., LTE coverage map attached
15. Reliability Issues	None ☐ / Yes ☐	Interference notes
16. Link Margin	___________ dB	Fade margin
17. Redundancy	Radios ☐ Yes / No; Antenna diversity ☐ Yes / No	

18. Health Monitoring	Yes ☐ / No ☐	Metric: RSSI, SNR
19. Lost Link Procedure	Timer: ___ sec; Action: RTH ☐ / Hover ☐ / Land ☐ / Other ☐	Failsafe details
20. Regain Control After Failsafe?	Yes ☐ / No ☐	Manual override possible?
21. Manual Termination	Yes ☐ / No ☐	Kill switch mechanism
22. ATC Communication (if req.)	RPA onboard radio ☐ Yes / No ☐	RPIC ATC radio freq: ___ MHz

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B. Navigation Systems

Field	Operator Entry	Notes/Examples
1. GNSS Used	GPS ☐ / GLONASS ☐ / Galileo ☐ / BeiDou ☐	Tick all that apply
2. Receiver Make/Model	___________	
3. GNSS Augmentation	SBAS ☐ / RTK ☐ / PPK ☐ / Other: ___	Accuracy: ___ m CEP
4. Redundancy	Dual GNSS ☐ Yes / No	
5. INS/IMU	Yes ☐ / No ☐	Spec: ___
6. Magnetometer	Yes ☐ / No ☐	Used for heading
7. Barometric Altimeter	Yes ☐ / No ☐	Calibrated by QNH ☐ / Auto ☐
8. Terrain Sensor	None ☐ / Lidar ☐ / Radar Altimeter ☐	Type: ___
9. Waypoint Accuracy	± ___ m	Test results
10. RTH Accuracy	___ m	From launch point
11. Wind Tolerance	___ m/s	Max wind hold
12. Position Awareness to Pilot	Yes ☐ / No ☐	Map telemetry provided
13. Geofencing	Enabled ☐ / Disabled ☐	Details & attached file
14. Compass Interference	Minimal ☐ / Possible ☐	Mitigation: ___
15. Last Compass Calibration	___________	Date/location
16. GNSS Loss Procedure	Dead-reckoning ☐ Yes / No	For ___ seconds
17. Hover Mode if GNSS Lost	Yes ☐ / No ☐	
18. Compass Failure Behavior	___________	e.g., revert to ATTI
19. Nav Failure Procedures	___________	Operator SOP

C. Surveillance and Detect-and-Avoid (DAA)

Field	Operator Entry	Notes/Examples
1. ADS-B Out Equipped	Yes ☐ / No ☐	1090 ES ☐ / 978 UAT ☐
2. ADS-B Power	___________ W	ICAO address: ___
3. DO-260B Compliant?	Yes ☐ / No ☐	
4. Mode C/S Transponder	Yes ☐ / No ☐	Code: ___
5. Other Devices	FLARM ☐ / Remote ID ☐	Details: ___
6. ADS-B In	Yes ☐ / No ☐	Integrated to GCS ☐
7. TCAS	Yes ☐ / No ☐	(Usually N/A for small)
8. Radar	Onboard ☐ / Ground-based ☐	Range/type: ___
9. Visual Observers	Yes ☐ / No ☐	# Observers: ___
10. Other Sensors	Optical ☐ / Acoustic ☐ / Other: ___	Describe capability
11. Pilot Alerting Method	Observer radio ☐ / GCS display ☐	
12. Autonomous DAA Maneuver	Yes ☐ / No ☐	Logic: ___
13. Pilot Avoidance Plan	___________	e.g., descend & hold
14. Anti-Collision Lights	Yes ☐ / No ☐	Spec/range: ___
15. High-Visibility Markings	Yes ☐ / No ☐	

D. Additional Information

Field	Operator Entry	Notes/Examples
Remote Pilot Station (RPS)	___________	Describe link, redundancy
Cybersecurity	___________	Encryption/authentication methods
Previous BVLOS Performance	___________	e.g., "10 hrs with no link loss"
Standards Compliance	___________	ASTM, DO-178, ASTM F3411-19 Remote ID, etc.

E. Operator Declaration:

I hereby declare that the RPAS described above possesses communication, navigation, and surveillance capabilities as stated, and that all information is accurate and truthful. I understand that operating BVLOS requires these systems to perform reliably, and I commit to not disabling or misusing any of the described capabilities during authorized operations. Any changes or deviations in CNS capabilities will be reported to GCAA prior to conducting operations.

Signature: ____ (Operator/Accountable Manager)
Name: ___ Date: _______

Contact info for technical queries (email/phone): ____

(End of Annex 4 – This form should accompany the application. GCAA will review the CNS capabilities to ensure compliance with the applicable standards (Ref: ICAO Annex 10) and safe operation practices)

References:

- GCAA. (2023). *Unmanned Aerial Vehicle Information Sheet – GCAA/UAVD/001 R1* (May 18 2023). Georgetown: GCAA. (Standard form indicating UAV weight categories and application types in Guyana.)

- International Civil Aviation Organization (ICAO). (2024). *Annex 6, Part IV – International Operations – Remotely Piloted Aircraft Systems*. Montreal: ICAO. (Newly adopted international Standards and Recommended Practices for RPAS, which inform the requirements in these regulations, e.g., on licensing, operational risk, and performance-based standards.)

- ICAO. (2022). *Annex 1 – Personnel Licensing (14th Ed.)*. Montreal: ICAO. (Standards for personnel competence and licensing, which underlie the requirement for licensed remote pilots in BVLOS operations.)

- ICAO. (2018). *Annex 10 – Aeronautical Telecommunications, Volume IV (Surveillance and Navigation Systems)*. Montreal: ICAO. (Contains standards for communication, navigation, and surveillance systems, referenced to ensure RPAS meet communication link reliability and ADS-B/transponder requirements.)

- ICAO. (2013). *Annex 19 – Safety Management*. Montreal: ICAO. (Basis for requiring RPAS operators to implement Safety Management Systems for BVLOS operations.)

- ICAO. (2020). *Annex 13 – Aircraft Accident and Incident Investigation*. Montreal: ICAO. (Relevant to the requirement that RPAS operators cooperate with investigations and report occurrences.)

- CASA (Civil Aviation Safety Authority, Australia). (2021). *Guidance on BVLOS Operational Risk Assessment*. (Provides insight into risk assessment (SORA) best practices adopted in these guidelines.)

(All in-text citations in the format 【source†lines】 correspond to the listed references. GCAA references denote Guyana Civil Aviation Authority documents; ICAO references denote international standards.)
