## Operational risk analysis overview for operations in the specific category



## PDRA – G01 Version 1.2: AMC 2 to Article 11 IR (EU) 2019/947

|     | Data of authorised UAS and operation  |  |  |  |  |
|-----|---|--|--|--|--|
| 1.  | UAS Operator Identification (eID)   |  |  |  |  |
| 2.  | Manufacturer or type certificate holder   |  |  |  |  |
| 3.  | Model name  |  |  |  |  |
| 4.  | Type of UAS configuration   | □ Conventional Airplane □ Helicopter □ Multirotor □ Hybrid/VTOL □ Lighter than air □ Other, please specify:  |  |  |  |
| 5.  | Is the UAS tethered during the operation?   | □Yes<br>□No  |  |  |  |
| 6.  | Maximum characteristic dimension (including propellers)   |  |  |  |  |
| 7.  | Maximum take-off mass (MTOM)<br>(indicated by the operator equal to or less<br>than the manufacturer's specification) |  |  |  |  |
| 8.  | Maximum operational speed   |  |  |  |  |
| 9.  | Type of propulsion system   | ☐ Electric ☐ Combustion ☐ Hybrid, specify type: ☐ Other, please specify:   |  |  |  |
| 10. | Number of type certificate or design verification report (if available)   |  |  |  |  |
| 11. | Certificate of airworthiness (if available)   |  |  |  |  |
| 12. | Number of noise certificate (if available)  |  |  |  |  |
| 13. | Short description of proposed operation including the locations   | Please provide the geo-coordinates for the operational volume (flight geography and contingency volume), the ground risk buffer and the air risk buffer (if available) as a separate file using either .txt; .kmz or .kml.  Give reference to the file name: |  |  |  |
| Sho | ort description of proposed operation   |  |  |  |  |
|     |   |  |  |  |  |
| Pla | ce, Date  | Name and Signature   |  |  |  |

## **Compliance Matrix for PDRA – G01 Version 1.2**

|                             |   | PDRA characterisation and  | d conditions                   |                          |  |  |  |  |
|-----------------------------|---|--|--------------------------------|--------------------------|--|--|--|--|
| Topic                       | Method of proof   | Condition  | Reference to documentation     | Proof                    |  |  |  |  |
|                             | 1. Operational characterisation (scope and limitations) |  |                                |                          |  |  |  |  |
| Level of human intervention |   | 1.1 No autonomous operations: the remote pilot should have the ability to maintain control of the UA, except in case of a loss of the command and control (C2) link. | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |
|                             | Self-declaration  | 1.2 The remote pilot should operate only one UA at a time.   | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |
|                             | Sell decidration  | 1.3 The remote pilot should not operate the UA from a moving vehicle.  | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |
|                             |   | 1.4 The remote pilot should not hand the control of the UA over another command unit.  | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |
| UA range limit              |   | 1.5 <u>Launch/recovery:</u> at VLOS distance from the remote pilot, if not operating from a safe prepared area.  | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |
|                             |   | Note: 'safe prepared area' means a controlled ground area that is suitable for the safe launch/recovery of the UA.   |                                |                          |  |  |  |  |
|                             | Self-declaration  | 1.6 <u>In flight:</u>  |                                |                          |  |  |  |  |
|                             |   | 1.6.1 <u>If no AOs are employed:</u> the UA is not operated further than 1 km (or other  | Document name:<br>Page number: | □"I declare compliance." |  |  |  |  |

|                        |                                     | PDRA characterisation and   | d conditions                   |   |
|------------------------|-------------------------------------|---|--------------------------------|---|
| Topic                  | Method of proof                     | Condition   | Reference to documentation     | Proof   |
|                        |                                     | distance defined by the competent authority) from the remote pilot.  Note: The remote pilot's workload should allow the remote pilot to continuously visually scan the airspace.                                  |                                |   |
|                        |                                     | 1.6.2 If AOs are employed: the range is not limited as long as the UA is not operated further than 1 km (unless a different distance is defined by the competent authority) from the AO who is nearest to the UA. | Document name:<br>Page number: | □"I declare compliance."  |
| Overflown area         | Declaration<br>supported by<br>data | 1.7 UAS operations should be conducted over sparsely populated areas.   | Document name:<br>Page number: | ☐"I declare compliance."  Please describe how population density data is identified |
| UA limitations         | Self-declaration                    | 1.8 Maximum characteristic dimension (e.g. wingspan, rotor diameter/area or maximum distance between rotors in case of a multirotor): 3 m   | Document name:<br>Page number: | □"I declare compliance."  |
|                        |                                     | 1.9 Typical kinetic energy (as defined in paragraph 2.3.1(k) of AMC1 to Article 11 of the UAS Regulation: up to 34 kJ   | Document name:<br>Page number: | □"I declare compliance."  |
| Flight height<br>limit | Self-declaration                    | 1.10 The maximum height of the operational volume should not be greater than 150 m (500ft) above the overflown area (or any other altitude reference defined by the Member State).                                | Document name:<br>Page number: | □"I declare compliance."  |

|            |                  |   | PDRA characterisat   | on and conditions                |                         |            |                     |
|------------|------------------|---|--|----------------------------------|-------------------------|------------|---------------------|
| Topic      | Method of prod   | f   | Condition  | Reference                        | to documentation        |            | Proof               |
|            |                  | operational volui   | to the vertical limit of the<br>me, an air risk buffer is to be<br>Air risk' under point 3 of this ta  | ble).                            |                         |            |                     |
| Airspace   |                  | 1.11 The UA show  | uld be operated:   |                                  |                         |            |                     |
|            |                  |   | ontrolled airspace (correspondi<br>risk that can be classified as AR   | _                                | ::                      | □"I c      | eclare compliance." |
|            | Self-declaration |   | gregated area (corresponding t<br>that can be classified as ARC-a  |                                  | ::                      | □"I c      | eclare compliance." |
|            |                  | States<br>an ass  | erwise established by the Mem in accordance with Article 15 (ociated air risk that can be clas higher than ARC-b).   | with Page number:                | ::                      | □″I c      | eclare compliance." |
| Visibility | Self-declaration | flight visibility   | uld be operated in an area whe<br>y is greater than 5 km.<br>or to GM1 UAS.STS-02.020(3).  | re Document name<br>Page number: | ::                      | □"I c      | eclare compliance." |
| Others     | Self-declaration | to carry dang<br>items in conn<br>horticultural<br>carriage of su | uld not be used to drop material erous goods, except for droppi ection with agricultural, or forestry activities where the chitems does not contravene able regulations. | ng Page number:                  | ):                      | □"I c      | eclare compliance." |
|            | 2. Oper          | itional risk classificat  | ion (according to the classifica   | tion defined in AMC1 to          | Article 11 of the UAS R | egulation) |                     |
| Final GF   | RC               | 3   | Final ARC  | ARC-b                            | SAIL                    |            | II                  |

|                            |                  | PDRA characterisation an   | d conditions                   |                          |  |  |
|----------------------------|------------------|--|--------------------------------|--------------------------|--|--|
| Topic                      | Method of proof  | Condition  | Reference to documentation     | Proof                    |  |  |
| 3. Operational mitigations |                  |  |                                |                          |  |  |
| Operational<br>volume      |                  | 3.1 To determine the operational volume, the applicant should consider the position-keeping capabilities of the UAS in 4D space (latitude, longitude, height, and time).   | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            | Self-declaration | 3.2 In particular, the accuracy of the navigation solution, the flight technical error of the UAS, as well as the flight path definition error (e.g. map error) and latencies should be considered and addressed when determining the operational volume.  | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            |                  | 3.3 The remote pilot should apply emergency procedures as soon as there is an indication that the UA may exceed the limits of the operational volume.  | Document name:<br>Page number: | □"I declare compliance." |  |  |
| Ground risk                | Self-declaration | 3.4 The UAS operator should establish a ground risk buffer to protect third parties on the ground outside the operational volume.  3.4.1 The minimum criterion should be the use of the '1:1 rule' (e.g. if the UA is planned to operate at a height of 150 m, the ground risk buffer should at least be 150 m). | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            |                  | 3.5 The operational volume and the ground risk buffer should be all contained in a sparsely populated area.  | Document name:<br>Page number: | □"I declare compliance." |  |  |

|          |                  | PDRA characterisation an  | d conditions                   |  |
|----------|------------------|---|--------------------------------|--|
| Topic    | Method of proof  | Condition   | Reference to documentation     | Proof  |
|          |                  | 3.6 The applicant should evaluate the area of operations typically by means of an on-site inspection or appraisal, and should be able to justify a lower density of people at risk in the operational area and the ground risk buffer.            | Document name:<br>Page number: | □"I declare compliance."   |
| Air risk |                  | 3.7 The UAS operator should establish an air risk buffer to protect third parties in the air outside the operational volume.  | Document name:<br>Page number: | □"I declare compliance."   |
|          | Self-declaration | 3.8 This air risk buffer should be contained in an airspace that meets the conditions defined in 1.11 and over sparsely populated areas. If the operation is limited at a height below 120 m, no additional vertical air risk buffer is required. | Document name:<br>Page number: | ☐"I declare compliance."  If the height of the operation is above 120 m and up to 150 m, please add the following:  "Supporting evidence is included in the OM."  "Justification supporting the appropriate air risk buffer is documented in []" |
|          |                  | 3.9 The operational volume should be outside any geographical zone corresponding to a flight restriction zone, as defined by the responsible authority, unless the UAS operator has been granted an appropriate permission.                       | Document name:<br>Page number: | □"I declare compliance."   |
|          |                  | 3.10 Prior to the flight, the remote pilot should assess the proximity of the planned operation to manned aircraft activity.  | Document name:<br>Page number: | □"I declare compliance."   |

|                        |                                     | PDRA characterisation and  | d conditions                   |  |
|------------------------|-------------------------------------|--|--------------------------------|--|
| Topic                  | Method of proof                     | Condition  | Reference to documentation     | Proof  |
|                        | Declaration<br>supported by<br>data | 3.11 If the UAS operation is performed above 120 m and up to 150 m, the UAS operator should develop appropriate procedures to not jeopardize other airspace users.                     | Document name:<br>Page number: | ☐"I declare compliance and supporting evidence is included in the OM." |
| Observers <sup>1</sup> |                                     | 3.12 If the UAS operator decides to employ one or more airspace observers (AOs), the remote pilot may operate the UA up to the distance that is specified in point 1.6.2.              | Document name:<br>Page number: | □"I declare compliance." □ n/a   |
|                        | Self-declaration                    | 3.13 The UAS operator should ensure the correct placement and the appropriate number of AOs along the intended flight path. Prior to each flight, the UAS operator should verify that: |                                |  |
|                        |                                     | 3.13.1 The visibility and the planned distance of the AOs are within the acceptable limits that are defined in the operations manual (OM);   | Document name:<br>Page number: | □"I declare compliance."   |
|                        |                                     | 3.13.2 there are no potential terrain obstructions for each AO;  | Document name:<br>Page number: | □"I declare compliance."   |
|                        |                                     | 3.13.3 that there are no gaps between the zones that are covered by each of the AOs;   | Document name:<br>Page number: | □"I declare compliance."   |
|                        |                                     | 3.13.4 communication with each AO is established and effective; and  | Document name:<br>Page number: | □"I declare compliance."   |

<sup>&</sup>lt;sup>1</sup> The UAS operator should demonstrate that they have sufficient confidence in the accuracy of the information about the height of the UA and the means to advert and avoid other airspace users and obstacles in the vicinity of the UA

|                      |                                     | PDRA characterisation and  | l conditions                   |   |
|----------------------|-------------------------------------|--|--------------------------------|---|
| Topic                | Method of proof                     | Condition  | Reference to documentation     | Proof   |
|                      |                                     | 3.13.5 if means are used by the AOs to determine the position of the UA, those means are functioning and effective.  Note: Instead of an AO, the remote pilot may perform the visual scan of the airspace, provided that the workload allows the remote pilot to perform his duties. | Document name:<br>Page number: | □"I declare compliance."  |
|                      |                                     | 4. UAS operator and UAS opera  | itions conditions              | l   |
| UAS operator and UAS |                                     | 4.1 The UAS operator should:   |                                |   |
| operations           |                                     | 4.1.1 develop an operations manual (OM) (for<br>the template, refer to AMC1<br>UAS.SPEC.030(3)(e) and to the<br>complementary information in GM1<br>UAS.SPEC.030(3)(e));   | Document name:<br>Page number: | ☐"I declare compliance and that supporting evidence is included in the OM." |
|                      | Declaration<br>supported by<br>data | 4.1.2 develop procedures to ensure that the security requirements applicable to the area of operations are complied with during in the intended operation;   | Document name:<br>Page number: | ☐"I declare compliance and that supporting evidence is included in the OM." |
|                      |                                     | 4.1.3 develop measures to protect the UAS against unlawful interference and unauthorised access;   | Document name:<br>Page number: | ☐"I declare compliance and that supporting evidence is included in the OM." |

|       |                 | PDRA characterisation and   | d conditions                   |   |
|-------|-----------------|---|--------------------------------|---|
| Topic | Method of proof | Condition   | Reference to documentation     | Proof   |
|       |                 | 4.1.4 develop procedures to ensure that all operations comply with Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data; in particular, the UAS operator should carry out a data protection impact assessment, when this is required by the data protection national authority of the Member State with regard to the application of Article 35 of that Regulation; | Document name:<br>Page number: | □"I declare compliance and that supporting evidence is included in the OM."   |
|       |                 | 4.1.5 develop guidelines for its remote pilots to plan UAS operations in a manner that minimises nuisance, including noise and other emissions-related nuisance, to people and animals  | Document name:<br>Page number: | □"I declare compliance and that supporting evidence is included in the OM."   |
|       |                 | 4.1.6 develop an emergency response plan (ERP) (see point 7 of in accordance with the conditions for a 'medium' level of robustness (please refer to AMC3 UAS.SPEC.030(3)(e);   | Document name:<br>Page number: | "I declare compliance and that the ERP is available to the competent authority for review."                                     |
|       |                 | 4.1.7 validate the operational procedures in accordance with the conditions for a 'medium' level of robustness, which are included in AMC2 UAS.SPEC.030(3)(e);  | Document name:<br>Page number: | □"I declare compliance and that the description for meeting this condition is available to the competent authority for review." |

|       |                 | PDRA characterisation and   | d conditions                   |  |
|-------|-----------------|---|--------------------------------|--|
| Topic | Method of proof | Condition   | Reference to documentation     | Proof  |
|       |                 | <ul> <li>4.1.8 ensure the adequacy of the contingency and emergency procedures, and prove it through any of the following:</li> <li>(a) dedicated flight tests; or</li> <li>(b) simulations, provided that the representativeness of the simulation means is proven for the intended purpose with positive results; or</li> <li>(c) any other means acceptable to the competent authority;</li> </ul> | Document name:<br>Page number: | ☐"I declare compliance and that the description for meetin this condition is available to the competent authority for review." |
|       |                 | 4.1.9 have a policy that defines how the remote pilot and any other personnel in charge of duties essential to the UAS operation can declare themselves fit to operate before conducting any operation;   | Document name:<br>Page number: | ☐"I declare compliance and that the description for meetin this condition is available to th competent authority for review."  |
|       |                 | 4.1.10 designate for each flight a remote pilot with adequate competency and other personnel in charge of duties essential to the UAS operation if needed;  | Document name:<br>Page number: | □"I declare compliance and that supporting evidence is included in the OM."  |
|       |                 | 4.1.11 ensure that the UAS operation effectively uses and supports the efficient use of the radio spectrum in order to avoid harmful interference;  | Document name:<br>Page number: | ☐"I declare compliance and that supporting evidence is included in the OM."  |

|             |                  | PDRA characterisation and   | l conditions                   |   |
|-------------|------------------|---|--------------------------------|---|
| Topic       | Method of proof  | Condition   | Reference to documentation     | Proof   |
|             |                  | 4.1.12 keep for a minimum of 3 years and maintain up to date a record of the information on UAS operations, including any unusual technical or operational occurrences and other data as required by the declaration or by the operational authorisation. | Document name:<br>Page number: | ☐" I declare compliance and that record-keeping data is available to the competent authority for review." |
| UAS         |                  | 4.2 The UAS operator should:  |                                |   |
| maintenance | Self-declaration | 4.2.1 ensure that the UAS maintenance instructions that are defined by the UAS operator are included in the OM and should cover at least the UAS manufacturer's instructions and requirements, when applicable;   | Document name:<br>Page number: | □"I declare compliance."  |
|             |                  | 4.2.2 ensure that the maintenance staff follows the UAS maintenance instructions when performing maintenance;   | Document name:<br>Page number: | □"I declare compliance."  |
|             |                  | 4.2.3 keep for a minimum of 3 years and maintain up to date a record of the maintenance activities conducted on the UAS;  | Document name:<br>Page number: | □"I declare compliance."  |
|             |                  | 4.2.4 establish and keep up to date a list of the maintenance staff employed by the UAS operator to carry out maintenance activities;   | Document name:<br>Page number: | □"I declare compliance."  |
|             |                  | 4.2.5 comply with point UAS.SPEC.100, if the UAS uses certified equipment;  | Document name:<br>Page number: | □"I declare compliance." □n/a   |

|                      |                             | PDRA characterisation and  | d conditions  |   |
|----------------------|-----------------------------|--|---|---|
| Topic                | Method of proof             | Condition  | Reference to documentation  | Proof   |
| External<br>services | Self-declaration            | 4.3 The UAS operator should ensure that the level of performance for any externally provided service that is necessary for the safety of the flight is adequate for the intended operation. The UAS operator should declare that this level of performance is adequately achieved.   | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance."  |
|                      |                             | 4.4 The UAS operator should define and allocate the roles and responsibilities between the UAS operator and the external service provider(s), if applicable.   | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance."  |
|                      |                             | 5. Conditions for the personnel in charge of duti  | ies essential to the UAS operation                                      |   |
| General              | Declaration<br>supported by | 5.1 The UAS operator should ensure that all personnel in charge of duties essential to the UAS operation are provided with competency-based, theoretical and practical training specific to their duties, which consists of the applicable theoretical elements derived from AMC1 UAS.SPEC.050(1)(d), and practical elements from AMC2 UAS.SPEC.050(1)(d) and UAS.SPEC.050(1)(e). In addition, for non-remote pilots, also from AMC3 UAS.SPEC.050(1)(d). | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance."  Evidence of training is available for inspection at the request of the competent authority or its authorised representative. The training programme is documented in the OM |
|                      | data                        | 5.2 The UAS operator should keep and maintain up to date a record of all the relevant qualifications and training courses completed by the remote pilot and the other personnel in charge of duties essential to the UAS operation and by the maintenance staff for at least 3 years after those persons have ceased to be employed by the organisation or have changed position within the organisation   | Document name: Page number:  Please describe how this condition is met. | ☐"I declare compliance."  Record-keeping data is available for inspection at the request of the competent authority.  |

|              | PDRA characterisation and conditions |  |                                |                          |  |
|--------------|--------------------------------------|--|--------------------------------|--------------------------|--|
| Topic        | Method of proof                      | Condition  | Reference to documentation     | Proof                    |  |
| Remote pilot | Self-declaration                     | 5.3 The remote pilot should have the authority to cancel or delay any or all flight operations under the following conditions: 5.3.1 when the safety of persons is jeopardised; or 5.3.2 when property on the ground is jeopardised; or 5.3.3 when other airspace users are jeopardised; or 5.3.4 when there is a violation of the terms of the operational authorisation. | Document name:<br>Page number: | □"I declare compliance." |  |
|              |                                      | 5.4 If AOs are employed, the remote pilot should ensure that the necessary number of AOs is available and correctly placed, and that the communication with them can be adequately established.  | Document name:<br>Page number: | □"I declare compliance." |  |
|              |                                      | 5.5 The remote pilot should:   |                                |                          |  |
|              |                                      | 5.5.1 not perform duties under the influence of psychoactive substances or alcohol, or when they are unfit to perform their tasks due to injury, fatigue, medication, sickness or other causes;  | Document name:<br>Page number: | □"I declare compliance." |  |
|              |                                      | 5.5.2 be familiar with the manufacturer's instructions provided by the manufacturer of the UAS   | Document name:<br>Page number: | □"I declare compliance." |  |
|              |                                      | 5.5.3 ensure that the UA remains clear of clouds;  | Document name:<br>Page number: | □"I declare compliance." |  |

|                         | PDRA characterisation and conditions |  |                                |                          |  |  |
|-------------------------|--------------------------------------|--|--------------------------------|--------------------------|--|--|
| Topic                   | Method of proof                      | Condition  | Reference to documentation     | Proof                    |  |  |
|                         |                                      | 5.5.4 perform unaided visual scan of the airspace and ensure that the AO(s) can perform the same, if required, to avoid any potential collision hazard;  | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                         |                                      | 5.5.5 obtain updated information relevant to the intended operation about any geographical zones defined in accordance with Article 15 of the UAS Regulation; and  | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                         |                                      | 5.5.6 ensure that the UAS is in a safe condition to complete the intended flight safely, and if applicable, check whether the direct remote identification is active and up to date.   | Document name: Page number:    | □"I declare compliance." |  |  |
| Multi-crew coordination | Self-declaration                     | 5.6 Where multi-crew coordination (MCC) is required, the UAS operator should:  |                                |                          |  |  |
| (MCC)                   |                                      | 5.6.1 designate the remote pilot-in-command to be responsible for each flight;   | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                         |                                      | 5.6.2 include procedures to ensure coordination between the remote crew members through robust and effective communication channels; those procedures should cover, as a minimum: 5.6.2.1 the assignment of tasks to the remote crew members; and 5.6.2.2 the establishment of step-by-step communication; and | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                         |                                      | 5.6.3 ensure that the training of the remote crew covers MCC.  | Document name:<br>Page number: | □"I declare compliance." |  |  |

|   |                                     | PDRA characterisation and   | conditions                     |   |
|---|-------------------------------------|---|--------------------------------|---|
| Topic   | Method of proof                     | Condition   | Reference to documentation     | Proof   |
| Maintenance<br>staff  | Declaration<br>supported by<br>data | 5.7 Any maintenance staff member that is authorised by the UAS operator to perform maintenance activities should have been adequately trained in the documented maintenance procedures.   | Document name:<br>Page number: | □"I declare compliance and that supporting evidence is included in the OM."  Evidence of training is available at the request of the competent authority. |
| Personnel in charge of duties essential to the UAS operation are fit to operate | Self-declaration                    | 5.8 The personnel in charge of duties essential to the UAS operation should declare that they are fit to operate before conducting any operation, based on the policy that is defined by the UAS operator.  | Document name:<br>Page number: | □"I declare compliance."  |
|   |                                     | 6. Technical condit   | ions                           |   |
| General   | Self-declaration                    | 6.1 The UAS should be equipped with means to monitor the critical parameters of a safe flight, in particular:  6.1.1 the UA position, height or altitude, ground speed or airspeed, attitude and trajectory; 6.1.2 the UAS energy status (fuel, battery charge, etc.); and 6.1.3 the status of critical functions and systems; as a minimum, for services based on RF signals (e.g. C2 Link, GNSS, etc.), means should be provided to monitor the adequate performance and trigger an alert when the performance level becomes too low. | Document name:<br>Page number: | □"I declare compliance."  |

|                                      | PDRA characterisation and conditions |   |                                |                          |  |
|--------------------------------------|--------------------------------------|---|--------------------------------|--------------------------|--|
| Topic                                | Method of proof                      | Condition   | Reference to documentation     | Proof                    |  |
|                                      |                                      | 6.2 The UA should have the performance capability to descend safely from its operating altitude to a 'safe altitude' in less than 1 minute, or have a descent rate of at least 2.5 m/s (500 fpm).   | Document name:<br>Page number: | □"I declare compliance." |  |
| Human-<br>machine<br>interface (HMI) |                                      | 6.3 The UAS information and control interfaces should be clearly and succinctly presented and should not confuse, cause unreasonable fatigue, or contribute to causing any disturbance to the personnel in charge of duties essential to the UAS operation in such a way that could adversely affect the safety of the operation.   | Document name:<br>Page number: | □"I declare compliance." |  |
|                                      | Self-declaration                     | 6.4 If an electronic means is used to support AOs in their role of maintaining awareness of the position of the UA, its HMI should: 6.4.1 be sufficiently easy to understand to allow AOs to determine the position of the UA during the operation; and 6.4.2 not degrade the AOs' ability to: 6.4.2.1 perform unaided visual scan of the airspace where the UA is operating for any potential collision hazard; and 6.4.2.2 maintain effective communication with the remote pilot at all times. | Document name: Page number:    | □"I declare compliance." |  |

|                            | PDRA characterisation and conditions |   |                                |                          |  |  |
|----------------------------|--------------------------------------|---|--------------------------------|--------------------------|--|--|
| Topic                      | Method of proof                      | Condition   | Reference to documentation     | Proof                    |  |  |
|                            |                                      | 6.5 The UAS operator should conduct a UAS evaluation that considers and addresses human factors to determine whether the HMI is appropriate for the operation.  | Document name:<br>Page number: | □"I declare compliance." |  |  |
| C2 links and communication |                                      | 6.6 The UAS should comply with the applicable requirements for radio equipment and the use of the RF spectrum.  | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            |                                      | 6.7 Protection mechanisms against interference should be used, especially if unlicensed bands (e.g. ISM) are used for the C2 link (mechanisms such as FHSS, DSSS or OFDM technologies or frequency deconfliction by procedure).                                     | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            |                                      | 6.8 The UAS should be equipped with a C2 link that is protected against unauthorised access to the command-and-control functions  | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            | Self-declaration                     | 6.9 In case of a loss of the C2 link, the UAS should have a reliable and predictable method to recover the command-and-control link of the UA or to terminate the flight in a way that reduces any undesirable effect on third parties in the air or on the ground. | Document name:<br>Page number: | □"I declare compliance." |  |  |
|                            |                                      | 6.10 Communication between the remote pilot and the AO(s) should allow the remote pilot to manoeuvre the UA with sufficient time to avoid any risk of collision with manned aircraft, in accordance with point UAS.SPEC.060(3)(b) of the UAS Regulation.            | Document name:<br>Page number: | □"I declare compliance." |  |  |

|                        |                                     | PDRA characterisation and   | conditions                     |                          |
|------------------------|-------------------------------------|---|--------------------------------|--------------------------|
| Topic                  | Method of proof                     | Condition   | Reference to documentation     | Proof                    |
| Tactical<br>mitigation |                                     | 6.11 The UAS design should be adequate to ensure that the time required between a command given by the remote pilot and the UA executing it does not exceed 5 seconds.  | Document name:<br>Page number: | □"I declare compliance." |
|                        | Self-declaration                    | 6.12 Where an electronic means is used to assist the remote pilot and/or AOs in being aware of the UA position in relation to potential 'airspace intruders', the information is provided with a latency and an update rate for intruder data (e.g. position, speed, altitude, track) that support the decision criteria.   | Document name:<br>Page number: | □"I declare compliance." |
| Containment            | Declaration<br>supported by<br>data | 6.13 To ensure a safe recovery from a technical issue that involves the UAS or an external system that supports the operation, the UAS operator should ensure that: 6.13.1 no probable failure of the UAS or of any external system that supports the operation would lead to operation outside the operational volume; and 6.13.2 it is reasonably expected that a fatality will not occur due to any probable failure of the UAS or of any external system that supports the operation. | Document name: Page number:    | □"I declare compliance." |
|                        |                                     | 6.14 The vertical extension of the operational volume should be 150 m above the surface (or any other reference altitude defined by the Member State).  | Document name:<br>Page number: | □"I declare compliance." |

| PDRA characterisation and conditions |  |                             |  |  |
|--------------------------------------|--|-----------------------------|--|--|
| Topic Method of proof                | Condition  | Reference to documentation  | Proof  |  |
|                                      | Note: The term 'probable' should be understood in its qualitative interpretation, i.e. 'anticipated to occur one or more times during the entire system/operational life of an item'.  |                             |  |  |
| Declaration<br>supported by<br>data  | if the adjacent area includes an assembly of people or if the adjacent airspace is classified as ARC-d (in accordance with the SORA): 6.15.1 The UAS should be designed to standards that are considered adequate by the competent authority and/or in accordance with a means of compliance that is acceptable to that competent authority such that: 6.15.1.1 the probability of the UA leaving the operational volume should be less than 10-4/FH; and 6.15.1.2 no single failure of the UAS or of any external system that supports the operation should lead to operation outside the ground risk buffer.  Note: The term 'failure' should be understood as an occurrence that affects the operation of a component, part, or element in such a way that it can no longer function as intended. Errors may cause failures but are not considered to be failures. Some structural or mechanical failures may be excluded from this criterion if it can be shown that these mechanical parts were designed according to aviation industry best practices. | Document name: Page number: | □"I declare compliance."  Analysis and/or test data with supporting evidence is available. |  |

| PDRA characterisation and conditions |  |                             |                          |  |
|--------------------------------------|--|-----------------------------|--------------------------|--|
| Topic Method of proof                | Condition  | Reference to documentation  | Proof                    |  |
|                                      | 6.15.2 SW and AEH whose development error(s) could directly lead to operations outside the ground risk buffer should be developed according to an industry standard or methodology that is recognised as adequate by the competent authority.  Note 1: The proposed additional safety conditions cover both the integrity and the assurance levels.  Note 2: The proposed additional safety conditions do not imply a systematic need to develop the SW and AEH according to an industry standard or methodology that is recognised as adequate by the competent authority. For instance, if the UA design includes an independent engine shutdown function that systematically prevents the UA from exiting the ground risk buffer due to single failures or an SW/AEH error of the flight controls from occurring, the intent of the conditions of point 6.15.1 above could be considered to be met. | Document name: Page number: | □"I declare compliance." |  |

|                                    | PDRA characterisation and conditions |   |   |                               |  |  |
|------------------------------------|--------------------------------------|---|---|-------------------------------|--|--|
| Topic                              | Method of proof                      | Condition   | Reference to documentation  | Proof                         |  |  |
| Remote identification <sup>2</sup> | Self-declaration                     | 6.16 The UAS has a unique serial number compliant with standard ANSI/CTA-2063-A-2019, Small Unmanned Aerial Systems Serial Numbers, 2019, according to Article 40(4) of Regulation (EU) 2019/945. | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance."      |  |  |
|                                    |                                      | 6.17 The UAS is equipped with a remote identification system according to Article 40(5) of Regulation (EU) 2019/945.  | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance."      |  |  |
| Lights <sup>2</sup>                | Self-declaration                     | 6.18 If the UAS is operated at night, it is equipped with at least one green flashing light according to point UAS.SPEC.050(1)(I)(i) of the UAS Regulation.                                       | Document name: Page number:  Please describe how this condition is met. | □"I declare compliance." □n/a |  |  |
| Place, Date                        |                                      |   | Name and Signature  |                               |  |  |

<sup>&</sup>lt;sup>2</sup> Applicable from 1 July 2022.