

Unmanned Aircraft System Operations in UK Airspace – The UK Recognised Assessment Entity

CAP 722B

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Revision History

Second Edition

December 2019

This edition takes into account the introduction of the harmonised European Union (EU) Unmanned Aircraft Systems (UAS) Regulations, which become applicable on 1 July 2020, and adjusts the scheme accordingly in preparation for this date. In line with international developments, the naming of the National Qualified Entity (NQE) has been changed to Recognised Assessment Entity (RAE).

First Edition

July 2019

Initial issue. Information has been extracted and modified from Appendix E of CAP 722 Sixth Edition March 2015 and updated where appropriate in accordance with the regulatory changes within ANO 2016 and subsequent amendments.

Foreword

Purpose

This document contains the requirements, administrative processes, instructions and guidance related to the operation of the Recognised Assessment Entity (RAE) scheme within the United Kingdom. It also describes the related remote pilot examinations and practical flying tests that will be administered under the RAE scheme. It is primarily intended for the use of organisations that are, or wish to be, approved as an RAE.

Content

The subject matter within this document provides the information necessary to ensure compliance with the relevant Unmanned Aircraft Systems (UAS) regulation within the UK. Where appropriate, the content of this document has also been harmonised internationally.

Availability

The latest version of CAP 722B can be located within the 'Publications' section of the CAA website ([CAA Publications](#)), or directly via www.caa.co.uk/cap722b.

Updated information can be found within the 'latest updates' section of the CAA website's UAS webpages www.caa.co.uk/uas.

The CAA also provides a more general aviation update service via the SkyWise system, which can be filtered by subject matter for relevant UAS related information.

Structure

CAP 722 is a series of UAS guidance documentation published by the CAA. This guidance is structured as follows:

CAP 722 Operations in UK Airspace

General guidance and policy for all UK UAS operations

CAP 722A Operating Safety Cases

Specific guidance on the production of UAS related safety cases and/or operational risk assessments

CAP 722B Recognised Assessment Entities

Point of Contact

Unless otherwise stated, all enquiries relating to CAP 722B must be made to:

UAS Unit
CAA
Safety and Airspace Regulation Group
Aviation House
Beehive Ring Road
Crawley
West Sussex
RH6 0YR

E-mail: uavenquiries@caa.co.uk

Abbreviations and Glossary of Terms

Note: The primary UAS related Abbreviations and Glossary of Terms is contained within CAP 722. This section only contains terms that are not currently listed within CAP 722.

Abbreviations

A

AUP Airspace User Portal

P

PDRA Predefined Risk Assessment

R

RAE Recognised Assessment Entity

S

SORA Specific Operational Risk Assessment

T

TPM Technical Procedures Manual

Glossary of Terms

A

Accountable Manager – A nominated person who has the authority for ensuring that all activities are carried out in accordance with the applicable requirements and regulations. The accountable manager is also responsible for establishing and maintaining an effective Management System.

C

Congested Area – In relation to a city, town or settlement, means any area which is substantially used for residential, industrial, commercial or recreational purposes.

E

Emergency Response Plan – Plan of actions to be carried out by the operator/remote pilot in the event of an emergency situation while conducting UAS operations.

M

Maximum Take-Off Mass (MTOM) – The maximum unmanned aircraft mass, including payload and fuel, as defined by the manufacturer or the builder, at which the unmanned aircraft can be operated.

R

Recognised Assessment Entity – An organisation approved by the CAA to submit reports and/or issue certificates on the CAA's behalf in relation to remote pilot competency.

S

Safety Risk – The estimated likelihood and severity of harm to people when they encounter aviation.

Specific Operations Risk Assessment (SORA) – A risk assessment methodology intended for use in the Specific category, which is described in the GM and AMC to Article 11 of Regulation (EU) 2019/947.

Standard Scenario – A type of UAS operation in the Specific category, as defined in Appendix 1 of the Annex to the Implementing Regulation, for which a precise list of mitigating measures has been identified in such a way that the competent authority can be satisfied with declarations in which operators declare that they will apply the mitigating measures when executing this type of operation.

T

Technical Procedures Manual – A manual used to describe all procedures and processes followed by the organisation in support of the organisational scope of work.

U

Uninvolved Persons – Persons who are not participating in the UAS operation or who are not aware of the instructions and safety precautions given by the UAS operator.

V

Visual Observer – A person who assists the remote pilot by performing unaided visual scanning of the airspace in which the unmanned aircraft is operating for any potential hazard in the air.

CHAPTER 1 | General

1. General

1.1. The Recognised Assessment Entity (RAE) Scheme

The Recognised Assessment Entity (RAE) Scheme has been developed to assist the CAA in assuring the competence of remote pilots for many of the 'large volume' VLOS operations that require an operational authorisation. The CAA approves RAEs to assess the competence of remote pilots against a specific set of requirements and to issue the appropriate certificate on the CAA's behalf. The names of all approved RAE organisations are published on the CAA's website.

The competency of the personnel involved in the operation of an unmanned aircraft is a primary factor in ensuring that unmanned aircraft operations remain tolerably safe. Within any UAS operation, a focus is placed on the competency of the remote pilot.

UAS regulations follow 3 basic concepts in that they are operation centric, risk based, and performance based. The fundamental principle in these concepts is the safety risk that an unmanned aircraft's flight will present to uninvolved third parties. UAS operations will fall into one of three categories; Open, Specific or Certified.

While the basic remote pilot competency requirements for operations within the Open category are covered by the successful completion of the CAA's 'Drone and Model Aircraft' online competency test¹, operations within the A2 subcategory require an additional remote pilot qualification, as do certain operations within the A1 subcategory until 30 June 2022. Similarly, within the Specific category, although competency can be addressed within the operational risk assessment (OSC or SORA), operations that are conducted under a standard scenario (STS) or a pre-defined risk assessment (PDRA) will include prescriptive details of the level of the remote pilot competency required for compliance.

Competency requirements are combined into a series of 'remote pilot certificates', further details of which can be found in the applicable Annexes of this document.

The UK remote pilot competency scheme consists of two certificates as follows:

- The '**A2 Certificate of Competency**' (A2 CofC) – This is a theoretical examination, conducted at an RAE test facility. The A2 CofC satisfies the Open category requirements for operations within the A2 subcategory, as well as the 'Transitional' elements of the A1 subcategory that apply until 30 June 2022 (as detailed in Article 22 of the Implementing Regulation).
- The '**General VLOS Certificate**' (GVC) – This comprises both a theoretical

¹ Or an equivalent competency test as prescribed within UAS.OPEN.020 (4)(b) of Regulation (EU) 2019/947

examination and a practical flight test, conducted at an RAE facility. The GVC satisfies the requirements for VLOS within the Specific category. The GVC satisfies the competency requirements of a published PDRA or STS that involves VLOS flight. The GVC is augmented by additional 'modules' which address any additional remote pilot competency levels that may be required in order to comply with the requirements of more complex STS or PDRA.

In some cases, these certificates may also be considered appropriate for some operations conducted under an operational risk assessment (e.g. an A2 CofC may prove sufficient in cases where the operation entails flight at reduced distances from uninvolved persons).

1.2. Scope

A UK RAE is an organisation that has been formally approved by the CAA to submit reports and/or issue certificates on the CAA's behalf in relation to the competency of remote pilots.

RAEs are approved by the CAA under the authority of Article 268 of the UK Air Navigation Order 2016 (the Order) and as such the approval is bounded by the limits of UK legislation. RAE organisations should note that approvals granted to them under this scheme are UK national approvals only and do not confer any form of additional approval under European legislation other than the certificates they issue. Specifically, a UK RAE is not a Qualified Entity as defined in Article 61 of Regulation (EU) 2018/1139 ('The Basic Regulation'). The UK CAA's RAE approval is limited to organisations whose primary trading address is in the UK.

This document sets out the requirements to be met by organisations seeking UK national approval as an RAE.

RAE applicants will be required to demonstrate their organisation's ability to train and assess the competence of remote pilots, based on a theoretical knowledge examination and, where relevant, a practical flight assessment. In addition, applicants are required to demonstrate that they have appropriate procedures for the assessment of operations manuals and to make recommendations for the issue of an operational authorisation for those UAS operations that are covered by pre-defined risk assessments.

1.3. Privileges

An RAE shall be entitled (within its terms of approval) to report to the CAA that a remote pilot has demonstrated the appropriate levels of remote pilot competency corresponding to the certificate being issued and to issue that certificate to the remote pilot. Where this report also includes a satisfactory assessment of the UAS operator's operations manual in association with a pre-defined risk assessment scenario, an RAE's report

(recommendation) may be immediately accepted by the CAA for the grant of an operational authorisation.

An RAE is not required to verify a remote pilot's theoretical competency when that person is using any of the acceptable alternatives that fulfil the remote pilot competency criteria elements detailed in CAP 722. Acceptable evidence of these 'critical elements' should be submitted to the CAA by the individual applicant when he or she applies for an operational authorisation.

1.4. Obligations

The holder of a UK RAE approval shall:

- Ensure that the exposition and the documents to which it refers are used as basic working documents within the organisation;
- Maintain the organisation in conformity with the procedures specified in the RAE approval;
- Ensure that any manuals, instructions or procedures used for the assessment of remote pilots are reviewed periodically and approved either by the organisation or the CAA as appropriate.

The RAE must keep the following records for a period of five years:

- A record of each student's:
 - Theoretical assessment;
 - Practical flight assessment;
 - Operations manual assessment.

Note: Records should include details of any failed examination/test attempts.

- Full details of any remote pilot competency certificate that has been issued, along with any additional modules included with the GVC;
- Any recommendation made to the CAA;
- A record of each quarterly formal, periodic internal safety review/meeting and any subsequent follow-up actions.

These records must be stored in a secure manner to ensure that no damage to, or tampering of, records can occur.

The RAE must provide the CAA with the following monthly and upon request:

- A list of all A2 CofC certificates that have been issued during that month;

- A list of all GVC certificates that have been issued during that month;
- A list of all GVC additional module certificates that have been issued during that month.

1.5. Transferability

Approval as a UK RAE is not normally transferable but may be considered by the CAA on a case by case basis.

CHAPTER 2 | The RAE Application Process

2. The RAE Application Process

2.1. Eligibility

Any natural or legal person (organisation) shall be eligible to apply for an approval under these requirements. Applicants must be at least 18 years of age and RAE approvals are limited to organisations whose primary place of business is in the UK.

2.2. Applications

Initial applications for approval as an RAE are to be made in writing to uavenquiries@caa.co.uk using [Form SRG1322](#). This application must contain all required documentation in support of the application as detailed in paragraph 2.3.

When applying, the applicant must undertake to pay the required charges. These charges are published on the CAA website as 'CAA Scheme of Charges (General Aviation)' www.caa.co.uk/ors5. The assessment process will not begin until the necessary fees have been paid. Where additional hours are required to assess an application, the applicant will be notified before any further charges are applied.

Amendments that result in a change to the status of the RAE approval will be subject to prior authorisation by the CAA, and an appropriate charge will be applied in accordance with the CAA Scheme of Charges. Further details are at paragraph 5.4.

2.3. Documentation

The organisation shall demonstrate, based on the information submitted in their documentation, that it has the capability to discharge its obligations.

The following points below are to be considered when preparing the required documentation:

General

- Facilities; including the facilities used for theoretical assessment and practical assessment, with minimum requirements for each;
- Equipment and tools;

- Processes and associated materials; i.e. Technical Procedures Manual and study material for students;
- Number and competence of staff; i.e. qualifications and experience for the role being performed.

The following documentation shall be submitted as part of an initial and renewal application for review by the CAA:

2.3.1. Exposition

The exposition must contain the following information:

- A statement signed by the accountable manager confirming that the exposition and any associated manuals will always be complied with;
- Scope of RAE approval;
- An organogram/chart of the RAE showing associated chains of responsibility;
- Documents detailing nominated post holders within the organisation, this shall include:
 - Description of post holders' duties and responsibilities;
 - Description of the respective person's competence.
- Documents detailing personnel nominated to conduct training, theoretical examinations and practical skill assessments, plus any other relevant staff to include:
 - Minimum requirements for each role identified, i.e. instructors, theory assessors, practical flight assessor;
 - Descriptions of each person's experience and competency;
 - Personnel duties and responsibilities.
- A list of staff authorised to submit reports to the CAA;
- A detailed description of the facilities that will be used for theoretical knowledge training, examinations, and practical skill assessments. This should include:
 - The minimum requirements for each facility;
 - The location of the approved facilities.
- The procedure for amendments to the RAE exposition and the notification of these changes to the CAA;

- The procedures for theoretical knowledge examinations and practical skill assessments, including templates for any assessment reports;
- The levels of theoretical knowledge training that the RAE will provide to remote pilots;
- Arrangements for a formal, periodic internal safety review that shall be convened at least once in any three-month calendar period. These reviews should be conducted sooner should an immediate safety risk be identified that requires immediate action by the organisation.

2.3.2. Technical Procedures Manual

The TPM outlines the processes and procedures for training and assessment. This can be presented as a separate document or as part of the exposition submission and must include details of:

- A2 Certificate of Competency course (*As outlined in Annex A*):
 - Outline course detail;
 - Theory training and assessment process;
 - The procedures and criteria that the organisation shall apply to determine; whether a certificate should be issued to a remote pilot.
- General VLOS Certificate (*As outlined in Annex B*):
 - Outline course detail;
 - Theory training and assessment process;
 - Operations manual writing and acceptance;
 - Practical flight assessment requirements and process, including a clear explanation and illustration of any specific manoeuvres that will be assessed;
 - The procedures and criteria that the organisation shall apply to determine whether a certificate should be issued to a remote pilot;
 - Details of additional GVC modules if applicable.

2.3.3. Examination Papers and Answers

The process for examinations must be captured within the TPM.