



# Civil Aviation Authority Information Notice



Number: IN-2015/008

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## Small Unmanned Aircraft – Acceptable Forms of Evidence for the Grant of a CAA Permission and Changes to the Approval Requirements for UK National Qualified Entities

This Information Notice contains information that is for guidance and/or awareness.

Recipients are asked to ensure that this Information Notice is copied to all members of their staff who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
<b>Aerodromes:</b>	Not primarily affected
<b>Air Traffic:</b>	Not primarily affected
<b>Airspace:</b>	Not primarily affected
<b>Airworthiness:</b>	Not primarily affected
<b>Flight Operations:</b>	All Unmanned Aircraft Systems Operators
<b>Licensed/Unlicensed Personnel:</b>	All Unmanned Aircraft Systems Operators

### 1 Introduction

1.1 The purpose of this Information Notice is threefold:

- To set out acceptable evidence/alternative qualifications (critical elements) that are acceptable for the grant of Small Unmanned Aircraft (SUA) Permission under Air Navigation Order (ANO) articles 166 and 167.
- To notify changes to the application and approval process for organisations seeking approval as a UK National Qualified Entity (NQE) for SUA. In essence, these changes will institute a dual-category system of approvals for UK NQEs based on the range of pilot competency assessment activity each individual NQE can undertake.
- To notify changes to the SUA Permission document related to granting permissions for a class of SUA rather than listing individual aircraft.

1.2 SUA means any unmanned aircraft, other than a balloon or a kite, having a mass of not more than 20 kg without its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight. Under certain circumstances, operators of SUA are required to obtain and fly in accordance with a Permission granted by the CAA. Examples of such operations include conducting aerial work, flying within congested areas or when flying close (within 50 m) to persons, vehicles or vessels that are not under the control of the person in charge of the aircraft. The requirement is detailed in articles 166(5) and 167(1) of the Air

Navigation Order 2009 (ANO 2009). Before granting such a Permission, the CAA needs to be presented with acceptable evidence of an applicant's pilot competency.

1.3 This IN supersedes IN-2014/044.

## 2 Grant of an SUA Permission – Critical Elements

2.1 The CAA has identified three critical elements which, taken together, constitute acceptable evidence of pilot competency. These three elements are:

- a) Adequate theoretical knowledge/general airmanship;
- b) Successful completion of a practical flight assessment on the class of SUA that is being applied for; and
- c) A minimum amount of recent flying experience on the class of SUA that is being applied for.

Although completion of all three elements constitutes acceptable evidence of pilot competency, the CAA also requires the submission and acceptance of an operations manual in each case before the Permission itself can be granted.

2.2 Prior to the publication of this IN, the CAA has accepted recommendations from approved NQEs in order to grant a 'standard' Permission for aerial work. The traditional NQE route allows an individual with no formal pilot qualifications or experience to undertake a course which can lead to a recommendation to the CAA for a grant of a CAA Permission. The courses cover all of the critical elements mentioned in paragraph 2.1 plus an assessment of the student's operational procedures as set out in their operations manual. Having successfully completed the course, the applicant will be granted a certificate by the NQE (typically the Basic National UAS Certificate – Small (BNUC-ST<sup>TM</sup>)/Remote Pilot Qualification (RPQ) etc). The Permission applicant is then able to apply through the NQE or directly to the CAA for the grant of a CAA Permission that will allow aerial work (flights for commercial purposes). The operations manual (ideally in electronic .pdf format) should accompany the formal application on form SRG 1320 [www.caa.co.uk/srg1320](http://www.caa.co.uk/srg1320), along with electronic copies of the critical evidence of pilot competency and the correct fee: [www.caa.co.uk/uas](http://www.caa.co.uk/uas).

2.3 As the SUA industry has developed, the CAA has been increasingly asked to accept alternative qualifications and methods of demonstrating pilot competency other than those provided through the NQE route. Many recent applicants for a Permission have formal aviation qualifications, hobbyist certificates or recent flight experience that are highly relevant for fulfilling the critical elements set out in paragraph 2.1 above. An analysis of the critical elements points towards the practical flight assessment as being the single most essential of the elements as small unmanned multirotor and fixed-wing aircraft have unique flight and control systems and characteristics. Unless an applicant has already been objectively assessed by a third-party (such as through the British Model Flying Association (BMFA) certificate system), then there still exists a need for applicants to complete this critical element through an independent assessment.

2.4 Following this recent review of operational policy, the CAA will now accept alternative methods of satisfying the critical elements in addition to completing a full NQE course. This will necessitate changes to the NQE approval system so that although a practical flight assessment will still need to be undertaken, completion of a full course will only be generally applicable to students with no existing aviation qualifications or experience. The changes to the NQE system are set out in [Changes to the NQE Application and Approval System](#) below. Acceptable alternatives to fulfil the critical elements (evidence of pilot competency) are shown at [Annex 3 Table 1](#).

### 3 Changes to the NQE Application and Approval System

3.1 This change will mean that NQE approvals will be assigned in one of two categories:

- **Full Category.** A Full Category NQE approval corresponds to the pre-existing, conventional approval for an NQE to assess the full range of pilot competency and to act as a 'one-stop shop' for candidates with no existing aviation qualifications or experience. In the move to the new structure, some of the more onerous NQE organisational requirements have been eliminated and a reduced annual fee structure has been introduced. A Full Category NQE must be able to provide a full course but can also choose to offer the individual critical elements to suitable applicants as required. The approval requirements for an organisation to act as a Full Category NQE are set out at [Annex 1](#).
- **Restricted Category.** The Restricted Category NQE approval has been instituted to allow existing 'standard' permission holders to act as a restricted NQE where they will only be approved to conduct practical flying assessments in addition to their general commercial activities. Restricted Category NQE organisations/individuals must have held at least a 'standard' Permission from the CAA for a minimum of one year before they can apply for NQE status. In addition, trade, industry and permission-holder membership organisations wishing to run voluntary coaching and proficiency courses may also apply for an NQE approval, as long as their members who intend carry out practical flying assessments are current permission holders in their own right. The approval requirements for an organisation to act as a Restricted Category NQE are set out at [Annex 2](#).

3.2 NQE organisations should note that Full and Restricted Category approvals granted under this process are UK National approvals only and do not confer any form of approval under European legislation. Specifically, an UK NQE is not a Qualified Entity as defined in Regulation (EC) No. 216/2008 ('The Basic Regulation').

3.3 In parallel with the change to the NQE approval system, the CAA-issued Permission for aerial work will also be updated. The current ANO Articles 166 and 167 Permission document is produced in two categories: Permission for SUA not exceeding 7 kg and Permission for SUA of greater than 7 kg but not exceeding 20 kg. Both these Permission documents list the actual type(s) (models) of aircraft that the operator intends to operate. In line with adjusting to the future structure, 'standard' permissions will not list specific types (models) but will grant permission to fly any SUA within one or more of the following classes:

- a) SUA multicopter with a maximum take-off mass (MTOM) not exceeding 7 kg.
- b) SUA multicopter with a MTOM greater than 7 kg but not exceeding 20 kg.
- c) SUA fixed-wing with a MTOM not exceeding 7 kg.
- d) SUA fixed-wing with a MTOM greater than 7 kg but not exceeding 20 kg.

Within each class, the applicant will be free to vary or add SUA as they wish without the requirement to undertake a practical flight assessment for each individual machine or when adding or changing to a new type (model). Both categories of NQE should make their recommendations to the CAA in one or more of the above classes. Existing Permissions, although currently listing individual aircraft, will automatically have the same privileges.

3.4 The CAA has not hitherto stipulated practical flight assessment standards and has allowed UK NQEs to be flexible in designing the actual test conditions. This practice is likely to continue until such time as national or European regulation defines practical test standards for SUA equivalent to those required for national or European Aviation Safety Agency (EASA) Part-FCL flight crew licences. UK NQEs should however ensure that their students are able to satisfactorily demonstrate at least the following skills during the practical flight assessment:

- a) Pre-flight actions including:
    - Mission planning, airspace considerations and site risk-assessment.
    - Aircraft pre-flight inspection and set-up (including flight controller modes and power-source hazards).
    - Knowledge of the basic actions to be taken in the event of an aircraft emergency or if a mid-air collision hazard arises during the flight.
  - b) In-flight procedures including:
    - Maintaining an effective look-out and keeping the aircraft within Visual Line of Sight (VLOS) at all times.
    - Performing accurate and controlled flight manoeuvres at representative heights and distances (including flight in 'Atti' mode (non-GPS assisted) or equivalent where fitted).
    - Real-time monitoring of aircraft status and endurance limitations.
    - Demonstration of a 'return-to-home' function following deliberate control-link transmission failure. Fixed-wing aircraft may demonstrate an equivalent procedure that results in a suitable automated, low-impact descent and landing.
  - c) Post-flight actions including:
    - Shutting down/making-safe the aircraft.
    - Post-flight inspection and recording of any relevant data relating to aircraft general condition, aircraft systems, aircraft components and power-sources, controller functionality and crew health and fatigue.
- 3.5 It is important to note that approved NQEs offering practical flight assessments must not carry out any 'on-the-job' training or assessment of students during their own normal commercial work activity. Student attendance during such events should only be in the guise of observer status, ancillary to any employee contractual obligations. Prospective NQEs should therefore carefully consider their own legal liability under the relevant commercial and private activity legislation before exposing their students to any work-place related hazard as may be found at public and private venues, building sites, film-sets etc.

## 4 Queries

- 4.1 Any queries or requests for further guidance as a result of this communication should be addressed to the [UAVEnquiries@caa.co.uk](mailto:UAVEnquiries@caa.co.uk) e-mail address.

## 5 Cancellation

- 5.1 This Information Notice will remain in force until further notice.

## **Annex 1 Requirements for Approval as a Full Category UK NQE**

### **1 Scope**

- 1.1 A UK National Qualified Entity (UK NQE) for Small Unmanned Aircraft (SUA) is an organisation (person) approved by the CAA to carry out assessments of the operators of SUA not exceeding 20 kg mass, and who is authorised to submit reports and recommendations to the CAA in respect of the operator. Article 244 of the Air Navigation Order 2009 (ANO 2009) is the authority for providing for this capability. This Annex sets out the requirements to be met by organisations seeking UK national approval as a Full Category UK NQE.
- 1.2 With regard to the assessment of potential SUA operators, Full Category UK NQE applicants will be required to demonstrate their organisation's ability and procedures to assess the competence of SUA remote pilots, based on both a theoretical knowledge/general airmanship examination (subjects and areas that are to be assessed are set out at [Appendix 1](#) to this Annex) and a practical flight assessment (requirements set out a paragraph 3.4 above). In addition, Full Category UK NQE applicants are required to demonstrate that they have appropriate procedures for the assessment of a potential SUA operator's operations manual and to make recommendations for the award of a permission to operate to the CAA.

### **2 Eligibility**

- 2.1 Any natural or legal person (organisation) shall be eligible as an applicant for an approval under these requirements.

### **3 Application**

- 3.1 Initial applications for approval as a Full Category UK NQE are to be made in writing to [uavenquiries@caa.co.uk](mailto:uavenquiries@caa.co.uk) using [Form SRG 1322](#).
- 3.2 When applying, the applicant must undertake to pay an annual charge. The initial application charge for one calendar year for a Full Category UK NQE is £1290 (to be paid on application). The application will not be processed until the initial charge has been received. The approval charge for subsequent years (renewal) will be at the lower rate of £602 per annum.
- 3.3 Amendments that result in a change to the approval of the organisation (as in [Changes to the NQE Organisation](#) below) will be subject to approval by the CAA and a variation charge of £129 will be incurred.

### **4 Issue of Approval**

- 4.1 An organisation shall be entitled to be approved as a Full Category UK NQE by the CAA when it has demonstrated compliance with the applicable requirements.

### **5 Requirements for the Grant of Approval**

#### **5.1 General Requirements**

- 5.1.1 Where an organisation that is seeking approval as a Full Category UK NQE is also involved in the commercial operation of SUA, or any other SUA operations for which a CAA Permission is required, there must be a distinct division between the operations and the UK NQE activities such that the objectivity of the recommendations and reports made under the UK NQE approval is not called into question.
- 5.1.2 The entity and the staff responsible for the assessment tasks must have the knowledge and competence to conduct the assessments and must be free of any pressure and incentive which could affect their judgment or the results of their investigations.

5.1.3 The entity must demonstrate the capability to adequately perform the technical and administrative tasks linked with the assessment process, including the use of personnel, facilities and equipment appropriate to the task.

5.1.4 The staff responsible for assessment must have:

- sound technical and vocational training;
- satisfactory knowledge of the requirements for the assessment tasks they carry out and adequate experience of such processes; and
- the ability to administer the declarations, records and reports that demonstrate that the relevant assessments have been carried out and the conclusions of those assessments.

5.1.5 The impartiality of the assessment staff must be guaranteed. Their remuneration must not depend on the number of assessments carried out or on the results of such assessments.

5.1.6 The Full Category UK NQE and the staff of the organisation shall not disclose information supplied by the operator to any person other than the UK CAA.

## 5.2 Specific Requirements

5.2.1 The organisation shall demonstrate, on the basis of the information submitted in the exposition, that it has the capability to discharge the organisations obligations:

a) with regard to:

- general approval requirements;
- facilities;
- working conditions;
- equipment and tools;
- processes and associated materials;
- number and competence of staff; and
- general organisation and coordination.

b) with regard to management and staff:

- i) an accountable manager has been nominated by the organisation, and is accountable to the CAA. The responsibility of that manager within the organisation shall consist of ensuring that all tasks are performed to the required standards and that the organisation is continuously in compliance with the data and procedures identified in the exposition;
- ii) a person or group of persons have been nominated to ensure that the organisation is in compliance with these requirements, and that they are identified, together with the extent of their authority. Such person(s) shall act under the direct authority of the accountable manager. The persons nominated shall be able to show the appropriate knowledge, background and experience to discharge their responsibilities; and
- iii) staff at all levels have been given appropriate authority to be able to discharge their allocated responsibilities and that there is full and effective coordination within the organisation in respect of the assessment of organisations that operate or intend to operate SUA.

c) with regard to staff who make reports to the CAA and are authorised by the organisation to sign the documents issued under the privileges of the Full Category UK NQE approval:



- i) the knowledge, background (including other functions in the organisation) and experience of the authorised staff are appropriate to discharge their allocated responsibilities;
- ii) the organisation maintains a record of all authorised staff, which shall include details of the scope of their authorisation; and
- iii) authorised staff are provided with evidence of the scope of their authorisation.

## 6 Exposition

- 6.1 The organisation shall submit to the CAA an exposition providing the following information:
- a) A statement signed by the Accountable Manager confirming that the exposition and any associated manuals which define the approved organisation's compliance with these requirements will be complied with at all times.
  - b) The title(s) and names of nominated personnel accepted by the CAA.
  - c) The duties and responsibilities of the nominated personnel including matters on which they may deal directly with the CAA on behalf of the organisation.
  - d) An organisational chart showing associated chains of responsibility of the nominated personnel.
  - e) A list of staff authorised to submit reports to the CAA.
  - f) A general description of manpower resources.
  - g) A general description of the facilities located at each address specified in the organisation's certificate of approval.
  - h) A general description of the scope of work relevant to the terms of approval.
  - i) The procedure for the notification of organisational changes to the CAA.
  - j) The distribution and amendment procedure for the exposition.
  - k) The procedures and criteria that the organisation shall apply to determine whether or not a recommendation should be made to the CAA that a 'standard' Permission be granted to an operator of an SUA, and how any recommendations for limitations and conditions that should apply to that permission will be determined.
  - l) Arrangements for a formal, periodic internal safety-review that shall be convened at least once in any three calendar month period.
- 6.2 The exposition shall be amended as necessary to maintain an up-to-date description of the organisation, and copies of any amendments shall be supplied to the CAA. Where such amendments change the approval of the organisation (as in [Changes to the NQE Organisation](#) below) the amendments will be subject to approval by the CAA.

## 7 Changes to the NQE Organisation

- 7.1 After the issue of the UK NQE approval, each change to the organisation that is significant to the showing of compliance, conformity or to training of remote pilots and assessment of organisations' operational suitability shall be approved by the CAA.
- 7.2 A change of the location of the facilities, scope of work or methods of training and assessment of the UK NQE organisation are deemed to be substantial changes and therefore necessitate an application to the CAA.
- 7.3 An application for approval for any change shall be submitted to the CAA and before implementation of the change the organisation shall demonstrate that it will continue to comply with these requirements after implementation.

## **8 Transferability**

- 8.1 Approval as a Full Category UK NQE is not transferable, except as a result of a change in ownership. A change of ownership is considered a significant change and necessitates application to the CAA.

## **9 Terms of Approval, Investigations and Findings**

- 9.1 The terms of approval shall identify the scope of work for which the holder is entitled to exercise the privileges of the UK NQE approval. Those terms shall be issued as part of the UK NQE approval. Each change to the terms of approval shall be approved by the CAA. An application for a change to the terms of approval shall be made in a form and manner established by the CAA. The organisation shall comply with the applicable requirements of this document.
- 9.2 The organisation shall make arrangements that allow the CAA to make any investigations necessary to determine compliance and continued compliance with these requirements. The organisation shall allow the CAA to review any report and make any inspection and perform or witness any flight and ground test necessary to check the validity of the compliance statements submitted.
- 9.3 When objective evidence is found by the CAA showing non-compliance of the holder of a Full Category UK NQE approval with the applicable requirements, the finding shall be classified as follows:
- a) A level-one finding is any non-compliance with these requirements that could lead to uncontrolled non-compliances and which could affect the safety of an SUA operation.
  - b) A level-two finding is any non-compliance with these requirements that is not classified as level-one.
- 9.4 After receipt of notification of findings:
- a) In the case of a level-one finding, the holder of the UK NQE approval shall demonstrate corrective action to the satisfaction of the CAA within a period of no more than 21 working days after written confirmation of the finding.
  - b) In the case of a level-two finding, the corrective action period granted by the CAA shall be appropriate to the nature of the finding but in any case initially shall not be more than six months. In certain circumstances and subject to the nature of the finding, the CAA may extend the six month period subject to a satisfactory corrective action plan.
- 9.5 In the case of level-one or level-two findings, the UK NQE approval may be subject to a partial or full suspension or revocation. The holder of the UK NQE approval shall provide confirmation to CAA of receipt of the notice of suspension or revocation of the UK NQE approval in a timely manner.

## **10 Duration and Continued Validity**

- 10.1 The period of validity of a Full Category UK NQE approval shall extend for one calendar year from the date the approval is granted, unless:
- a) the organisation fails to demonstrate compliance with the applicable requirements or any changes to the requirements, criteria or assessment standards that may subsequently be published by the CAA.
  - b) the CAA is prevented by the organisation from performing its investigations; or
  - c) there is evidence that the organisation cannot maintain satisfactory control of the activities under the UK NQE approval; or
  - d) the organisation no longer meets the eligibility requirements for the UK NQE approval; or



e) the certificate has been surrendered or revoked.

10.2 Upon surrender or revocation, the certificate shall be returned to the CAA.

## **11 Privileges**

11.1 A Full Category UK NQE shall be entitled (within its terms of approval) to report to the CAA that an operator of an SUA has demonstrated the capability safely to operate such aircraft within the specified weight category (class) and that the student meets all of the three critical elements that comprise acceptable evidence of pilot competency. Where this report also includes an assessment of the student's operations manual as satisfactory, a Full Category UK NQE's report (recommendation) may be immediately accepted by the CAA for the grant in full of a Permission for aerial work.

## **12 Obligations of the Holder**

12.1 The holder of a Full Category UK NQE approval shall, as applicable:

- a) ensure that the exposition and the documents to which it refers are used as basic working documents within the organisation;
- b) maintain the organisation in conformity with the data and procedures approved for the UK NQE approval;
- c) ensure that required manuals or instructions for the assessment of operators are reviewed periodically and approved either by the organisation or the CAA as appropriate; and
- d) record all details of work carried out.

**Appendix 1 to Annex 1 Small Unmanned Aircraft – Remote Pilot Theoretical Knowledge / General Airmanship Syllabus**

<b>Subject</b>	<b>Areas to be Covered</b>
Air Law/Responsibilities	<p>Terminology</p> <p>CAP 393:</p> <ul style="list-style-type: none"> <li>- Air Navigation Order:                             <ul style="list-style-type: none"> <li>- Relevant articles and definitions</li> </ul> </li> <li>- Standardised European Rules of the Air (SERA) Regulations:                             <ul style="list-style-type: none"> <li>- General overview</li> <li>- Avoidance of collisions ('See and Avoid')</li> </ul> </li> </ul> <p>CAP 722:</p> <ul style="list-style-type: none"> <li>- Policy Overview</li> </ul> <p>Incident and Accident Reporting:</p> <ul style="list-style-type: none"> <li>- CAP 382 (general requirements)</li> <li>- CAP 722 (specific requirements)</li> <li>- Airprox reporting</li> <li>- Investigation handling/assistance</li> </ul> <p>Insurance:</p> <ul style="list-style-type: none"> <li>- Aircraft and third-party liability</li> </ul>
UAS Airspace Operating Principles	<p>Airspace overview:</p> <ul style="list-style-type: none"> <li>- Flight Information Region (FIR)</li> <li>- Airspace Classifications:                             <ul style="list-style-type: none"> <li>- Differing considerations</li> <li>- Controlled Airspace</li> </ul> </li> <li>- Specific airspace types:                             <ul style="list-style-type: none"> <li>- Aerodrome Traffic Zone (ATZ)</li> <li>- Control Zone (CTR)</li> <li>- gliding/parachuting sites</li> </ul> </li> <li>- Airspace reservations:                             <ul style="list-style-type: none"> <li>- Danger Areas</li> <li>- Prohibited Areas</li> <li>- Restricted Areas</li> <li>- Temporary Airspace Reservations</li> </ul> </li> </ul>

Subject	Areas to be Covered
UAS Airspace Operating Principles (continued)	Obtaining information/approvals: <ul style="list-style-type: none"> <li>- UK Aeronautical Information Publication (AIP)</li> <li>- Aeronautical Information Circulars (AICs)</li> <li>- Notices to Airmen (NOTAMs)</li> <li>- Chart interpretation</li> <li>- Whom to contact</li> </ul> SUA Operations: <ul style="list-style-type: none"> <li>- Visual Line Of Sight (VLOS)</li> <li>- Segregated Airspace</li> </ul>
Airmanship and Aviation Safety	Good airmanship principles: <ul style="list-style-type: none"> <li>- Aircraft safe to operate</li> <li>- Remote Pilot fit to operate aircraft</li> <li>- Proper planning and preparation</li> <li>- Hazard identification</li> </ul> Flight Safety: <ul style="list-style-type: none"> <li>- Avoiding collisions</li> <li>- 'See and Avoid' with respect to manned aircraft</li> <li>- Perception:                             <ul style="list-style-type: none"> <li>- Distance</li> <li>- Height</li> <li>- Speed</li> </ul> </li> <li>- Awareness</li> <li>- Planning</li> <li>- Go/No Go decisions</li> </ul> Remote Pilot logbooks Overflight of people, crowds and gatherings: <ul style="list-style-type: none"> <li>- Third-party liability</li> </ul>
Human Factors	Good airmanship Medical fitness: <ul style="list-style-type: none"> <li>- Crew health precautions</li> <li>- Alcohol, drugs, medication</li> <li>- Medical restrictions</li> </ul>

Subject	Areas to be Covered
Human Factors (continued)	<p>Fatigue:</p> <ul style="list-style-type: none"> <li>- Flight duration/flight workload</li> <li>- Time of Flight</li> <li>- Working Hours</li> </ul> <p>Outdoors and lone working:</p> <ul style="list-style-type: none"> <li>- Effects of weather</li> <li>- Remote and lone working</li> </ul> <p>Crew/colleague management</p> <p>Depth perception</p> <p>Blind spot</p> <p>Scan technique</p> <p>Decision process</p> <p>Public/Third parties</p> <p>Stress/Pressure from 'customers'</p>
Meteorology	<p>Introduction to obtaining and interpreting weather information:</p> <ul style="list-style-type: none"> <li>- weather reporting resources</li> <li>- reports, forecasts and meteorological conventions appropriate for typical SUA flight operations</li> </ul> <p>Local weather assessments</p> <p>Operational envelope:</p> <ul style="list-style-type: none"> <li>- Effects on the SUA:                             <ul style="list-style-type: none"> <li>- Wind</li> <li>- Urban effects</li> <li>- Gradients</li> <li>- Masking</li> <li>- Icing</li> <li>- Temperature</li> <li>- Precipitation</li> <li>- Turbulence</li> </ul> </li> </ul> <p>Visibility factors</p> <p>Clouds:</p> <ul style="list-style-type: none"> <li>- Cumulonimbus (CB) hazards (including lightning)</li> </ul>

<b>Subject</b>	<b>Areas to be Covered</b>
Navigation/Charts	<p>Basic Map reading (OS):</p> <ul style="list-style-type: none"><li>- 1:50,000 and 1:25,000</li></ul> <p>Aviation Charts:</p> <ul style="list-style-type: none"><li>- 1:500,000 and 1:250,000</li><li>- Interpretation</li><li>- Specialised Charts (e.g. London helicopter routes)</li></ul> <p>Understanding of basic terms:</p> <ul style="list-style-type: none"><li>- Nautical mile</li><li>- Feet</li><li>- km</li><li>- Elevation</li><li>- Altitude</li></ul> <p>GPS principle:</p> <ul style="list-style-type: none"><li>- How it works and limitations</li></ul>



Subject	Areas to be Covered
Aircraft Knowledge	<p>Basic principles of flight:</p> <ul style="list-style-type: none"> <li>- Fixed-wing, rotor and multi-rotor</li> </ul> <p>Command and Control:</p> <ul style="list-style-type: none"> <li>- Datalink frequencies/spectrum</li> <li>- Manual intervention/override</li> <li>- Flight control modes</li> </ul> <p>Limitations:</p> <ul style="list-style-type: none"> <li>- Operational envelope</li> <li>- Stability</li> <li>- Mass</li> <li>- Centre of gravity</li> <li>- Effect of payload on flight</li> </ul> <p>Operating Guides:</p> <ul style="list-style-type: none"> <li>- Flight procedures/basic drills</li> <li>- Emergencies</li> </ul> <p>Maintenance of system:</p> <ul style="list-style-type: none"> <li>- Scheduled and repairs</li> <li>- Security of aircraft/attached items</li> <li>- Manufacturer's recommendations</li> <li>- Assessment 'Safe to Be Flown?'</li> </ul>
Operating Procedures	<p>Pre-Planning:</p> <ul style="list-style-type: none"> <li>- Consideration of intended task</li> </ul> <p>Site assessment:</p> <ul style="list-style-type: none"> <li>- Establishing a safe operating environment:                             <ul style="list-style-type: none"> <li>- Hazard identification</li> <li>- Risk assessment</li> <li>- Mitigating measures</li> </ul> </li> <li>- Site Owner's Permission</li> </ul> <p>Situational awareness:</p> <ul style="list-style-type: none"> <li>- Location</li> <li>- Airspace</li> <li>- Aerodromes</li> <li>- Obstructions</li> <li>- Public</li> </ul>

Subject	Areas to be Covered
Operating Procedures (continued)	<p>Communications:</p> <ul style="list-style-type: none"> <li>- Operating alone</li> <li>- Liaison with Air Traffic Control</li> <li>- Operating with other air users</li> </ul> <p>Pre-flight:</p> <ul style="list-style-type: none"> <li>- Pre-flight checklist</li> <li>- Security of attachments/payload</li> <li>- Airworthiness</li> <li>- Failsafe check</li> <li>- Battery condition</li> <li>- Weather</li> </ul> <p>In Flight:</p> <ul style="list-style-type: none"> <li>- In-flight monitoring</li> <li>- Battery status</li> <li>- Visual Line of Sight</li> <li>- Deconfliction/separation</li> </ul> <p>Post-flight:</p> <ul style="list-style-type: none"> <li>- Post-flight actions</li> <li>- Debrief/logging of flight details</li> <li>- Post-flight maintenance</li> </ul> <p>Emergency Actions:</p> <ul style="list-style-type: none"> <li>- Loss of control/flyaway</li> <li>- Malfunctions</li> <li>- Designated landing area not clear</li> <li>- Aircraft deconfliction</li> <li>- Collision Avoidance</li> </ul> <p>Security:</p> <ul style="list-style-type: none"> <li>- Public access to aircraft and control</li> </ul>

## **Annex 2: Requirements for Approval as a Restricted Category UK NQE**

### **1 Scope and Eligibility**

- 1.1 A UK National Qualified Entity (UK NQE) for Small Unmanned Aircraft (SUA) is an organisation (person) approved by the CAA to carry out assessments of the operators of SUA not exceeding 20 kg mass, and whom is authorised to submit reports and recommendations to the CAA in respect of the operator. Article 244 of the Air Navigation Order 2009 (ANO 2009) is the authority for providing for this capability. Set out below are the requirements to be met by organisations seeking UK national approval as a Restricted Category UK NQE.
- 1.2 Any natural or legal person ('organisation') shall be eligible as an applicant for an approval under these requirements.
- 1.3 The applicant must have held a CAA Permission for Aerial Work (ANO Articles 166/167) for a minimum period of one year prior to seeking approval as a Restricted Category UK NQE. Eligibility in meeting these criteria will be verified via the CAA records system.

### **2 Application**

- 2.1 Initial applications for approval as a Restricted Category UK NQE are to be made in writing to [uavenquiries@caa.co.uk](mailto:uavenquiries@caa.co.uk) using **Form SRG 1322**. The applicant shall state in Section 5 that they are applying for Restricted Category UK NQE status. This form will be updated during 2015 to reflect the change to a two-category UK NQE system.
- 2.2 When applying, the applicant must undertake to pay an annual charge. The initial application charge for one calendar year for a Restricted Category UK NQE is £430 (to be paid on application). The application will not be processed until the initial charge has been received. The approval charge for subsequent years (renewal) will be at the lower rate of £344 per annum.
- 2.3 Amendments that result in a substantial change to the approval of the organisation will be subject to approval by the CAA and a variation charge of £129 will be incurred.
- 2.4 If a Restricted Category UK NQE wishes to change to a Full Category UK NQE, the applicable charge will be the difference between the charge for the Restricted Category UK NQE and the Full Category UK NQE (charge as shown at **Annex 1**).

### **3 Issue of Approval**

- 3.1 An organisation shall be entitled to be approved as a Restricted Category UK NQE by the CAA when it has demonstrated compliance with the applicable requirements.

### **4 Requirements for the Grant of Approval**

#### **4.1 General Requirements**

- 4.1.1 An existing permission holder that is seeking approval as a Restricted Category UK NQE must make a distinct division between their general commercial operations and their Restricted Category UK NQE activities such that the objectivity of the recommendations and reports made under the UK NQE approval is not called into question.
- 4.1.2 The entity and the staff responsible for the assessment tasks must have adequate knowledge and competence of the operations of the class of SUA that is to be assessed. The person responsible for conducting the practical flight assessment may also offer suitable training to the student prior to conducting the assessment, however this shall not be mandatory and the student has the right to only undertake the practical flight assessment.

- 4.1.3 The entity must demonstrate the capability to adequately perform the technical and administrative tasks linked with the assessment process, including the use of personnel, facilities, equipment and record-keeping appropriate to the task. In addition, arrangements shall be made for a formal, periodic internal safety review/meeting that shall be convened at least once in any three calendar month period (quarterly).
- 4.1.4 The entity must keep the following records for a period of two years:
- A record of each student's practical flight assessment and any recommendation made to the CAA.
  - A record of each quarterly formal, periodic internal safety review/meeting and any subsequent follow-up actions.
- 4.1.5 The requirements set forth in paragraphs 4.1.2 and 4.1.3 (above) shall be set out in a separate 'UK NQE Exposition' section included in the Permission holder's existing operations manual. This should include the named person(s) authorised to undertake the practical flight assessments and who are authorised to submit reports to the CAA.
- 4.1.6 As part of the operations manual, the Exposition shall be amended as necessary to maintain an up-to-date description of the organisation, and copies of any amendments shall be supplied to the CAA. Where such amendments change the approval of the organisation, the amendments will be subject to approval by the CAA.
- 4.1.7 The Restricted Category UK NQE and the staff of the organisation shall not disclose information supplied by the operator to any person other than the UK CAA.

## **5 Transferability**

- 5.1 Approval as a Restricted Category UK NQE is not transferable, except as a result of a change of ownership. A change of ownership is considered a significant change and necessitates application to the CAA.

## **6 Terms of Approval, Investigations and Findings**

- 6.1 The terms of approval shall identify the scope of work for which the holder is entitled to exercise the privileges of a Restricted Category UK NQE approval. Those terms shall be issued by the CAA as part of the UK NQE approval.
- 6.2 The organisation shall make arrangements that allow the CAA to make any investigations necessary to determine compliance and continued compliance with these requirements. The organisation shall allow the CAA to review any report and make any inspection and perform or witness any flight and ground test necessary to check the validity of the compliance statements submitted.
- 6.3 When objective evidence is found by the CAA showing non-compliance of the holder of a Restricted Category UK NQE approval with the applicable requirements, the finding shall be classified as follows:
- a) A level-one finding is any non-compliance with these requirements that could lead to uncontrolled non-compliances and which could affect the safety of an SUA operation.
  - b) A level-two finding is any non-compliance with these requirements that is not classified as level-one.

6.4 After receipt of notification of findings:

- a) In the case of a level-one finding, the holder of a Restricted Category UK NQE approval shall demonstrate corrective action to the satisfaction of the CAA within a period of no more than 21 working days after written confirmation of the finding.
- b) In the case of a level-two finding, the corrective action period granted by the CAA shall be appropriate to the nature of the finding but in any case initially shall not be more than six months. In certain circumstances and subject to the nature of the finding, the CAA may extend the six month period subject to a satisfactory corrective action plan.

6.5 In the case of level-one or level-two findings, the Restricted Category UK NQE approval may be subject to a partial or full suspension or revocation. The holder of the approval shall provide confirmation to the CAA of receipt of the notice of suspension or revocation of the approval in a timely manner.

## 7 Duration and Continued Validity

7.1 The period of validity of a Restricted Category UK NQE approval shall extend for one calendar year from the date the approval is granted, unless:

- a) the organisation fails to demonstrate compliance with the applicable requirements or any changes to the requirements, criteria or assessment standards that may subsequently be promulgated by the CAA.
- b) the CAA is prevented by the organisation from performing its investigations; or
- c) there is evidence that the organisation cannot maintain satisfactory control of the activities under the UK NQE approval; or
- d) the organisation no longer meets the eligibility requirements for their UK NQE approval; or
- e) the certificate has been surrendered or revoked.

7.2 Upon surrender or revocation, the certificate shall be returned to the CAA.

## 8 Privileges

8.1 A Restricted Category UK NQE shall be entitled to report to the CAA that, following a practical flight assessment, the operator of an SUA has demonstrated the capability to safely and competently operate such an SUA within the specified weight category (class).

## 9 Obligations of the Holder – Practical Flight Assessment

9.1 Restricted Category UK NQEs are to ensure that their students are able to satisfactorily demonstrate at least the following skills during the practical flight assessment:

- a) Pre-flight actions including:
  - Mission planning, airspace considerations and site risk-assessment.
  - Aircraft pre-flight inspection and set-up (including flight controller modes and power-source hazards).
  - Knowledge of the basic actions to be taken in the event of an aircraft emergency or if a mid-air collision hazard arises during the flight.
- b) In-flight procedures including:
  - Maintaining an effective look-out and keeping the aircraft within Visual Line of Sight (VLOS) at all times.



- Performing accurate and controlled flight manoeuvres at representative heights and distances (including flight in 'Atti' (non-GPS assisted) mode or equivalent where fitted).
  - Real-time monitoring of aircraft status and endurance limitations.
  - Demonstration of the 'return-to-home' function following deliberate control-link transmission failure. Fixed-wing aircraft may demonstrate an equivalent procedure that results in a suitable automated, low-impact descent and landing.
- c) Post flight actions including:
- Shutting down/making-safe the aircraft.
  - Post-flight inspection and recording of any relevant data relating to aircraft general condition, aircraft systems, aircraft components and power-sources, controller functionality and crew health and fatigue.

9.2 It is not strictly necessary for the holder of a Restricted Category UK NQE to verify any of the other acceptable alternative evidence of pilot competency shown below at [Annex 3](#) to this Information Notice. Acceptable evidence of these critical elements should be furnished to the CAA by the individual applicant when he or she applies for a Permission for Aerial Work.

### Annex 3 Pilot Competency Critical Elements – Acceptable Alternative Evidence

	(a)	(b)	(c)	(d)
	Existing Aviation Qualification:	<b>Critical Element:</b> <b>Theoretical Knowledge Requirement / General Airmanship</b>  (no requirement for annual renewal)	<b>Critical Element:</b> <b>Initial Practical Flight Assessment Requirement</b>  (no requirement for annual renewal)	<b>Critical Element:</b> <b>Experience Requirement</b>  (annual renewal)
1	Nil	Completion of a <b>Full Category NQE</b> course		2 hours total flight experience logged within the last 3 calendar months on the class of SUA for which a Permission is sought.  Pilots may self-certify through logbook entries.
2	Current EASA Fixed-Wing, Helicopter or Microlight license	Nil	Pilot flight skills assessment verified to the CAA by a <b>Full or Restricted Category NQE</b> in at least one of the following four classes:	
3	Current UK National Fixed-Wing, Helicopter or Microlight license	Nil	a) SUA multirotor with a maximum take-off mass (MTOM) not exceeding 7 kg.	
4	UK Military pilot / remote pilot or RPAS operator qualification <i>(applicable where basic flight training has been carried out in non-segregated UK airspace)</i>  RAF VGS Instructor qualifications commencing at G1 Instructor level are also acceptable	Nil	b) SUA multirotor with a MTOM greater than 7 kg but not exceeding 20 kg.  c) SUA fixed-wing with a MTOM not exceeding 7 kg.  d) SUA fixed-wing with a MTOM greater than 7 kg but not exceeding 20 kg.	
5	British Gliding Association (BGA) - Bronze 'C' and above (or EASA equivalent)	Nil		
6	BMFA 'A' or 'B' Certificates	Nil	Nil. Helicopter certificate accepted for multirotors	
7	Non-UK SUA/RPAS qualification/license  Other lapsed pilot licences or certificates	Case-by-case CAA assessment		