

Consultation:

# UK Specific Operations Risk Assessment (UK SORA) Consultation

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# Contents

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<b>Contents</b>	<b>3</b>
<b>Chapter 1</b>	<b>5</b>
<b>Introduction</b>	<b>5</b>
<b>Consultation and scope</b>	<b>5</b>
<b>Chapter 2</b>	<b>9</b>
<b>Responding to this consultation</b>	<b>9</b>
<b>Next Steps</b>	<b>9</b>
<b>Consultation Details</b>	<b>9</b>

## Foreword

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This consultation forms part of the UK Civil Aviation Authority's (CAA) ongoing work to enable Unmanned Aircraft System operations in UK Airspace in the Specific Category. A key component of the CAA Future of Flight Programme.

UAS are playing an increasingly important role in our society. Many businesses are harnessing the value of UAS in their day-to-day operations. As UAS technology is becoming more advanced and more widely available, demand for services involving UAS is growing.

The introduction of a UK version of the Specific Operations Risk Assessment (UK SORA) is a key policy to enable UAS operations at scale. UK SORA will provide the main application risk assessment framework for the future of the Specific category as the AMC and GM to UK Regulation (EU) 2019/947 Article 11 Rules for conducting an operational risk assessment.

In addition to the UK SORA policy framework, this consultation introduces further work that has been conducted by the CAA to digitise all applications for UAS activities through the UK SORA Application Service. UK SORA has been developed as a 'digital first' application process as part of our commitment to improving engagement and applicant experience.

The feedback provided to this consultation will be essential to enable the CAA to develop policy that supports the UAS industry. I encourage you to take this opportunity to help shape the future of UAS policy.

## CHAPTER 1

# Introduction

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### Consultation and scope

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- 1.1 The CAA is consulting on our proposal to implement, as UK SORA, the Joint Authorities for Rulemaking on Unmanned Systems (JARUS) version 2.5 of the Specific Operations Risk Assessment (JARUS SORA) with the differences proposed in this document.
- 1.2 JARUS SORA version 2.5 was published for consultation on behalf of the UK CAA (and other member international NAAs) by JARUS. The CAA encouraged UK stakeholders to engage with this consultation via Skywise (SW2023/011 23<sup>rd</sup> January 2023). The JARUS consultation closed on the 6<sup>th</sup> of March 2023 and the final version was published in June 2024. The JARUS SORA version 2.5 documentation can be found on the JARUS [website](#).
- 1.3 Noting this list is not exhaustive, the CAA is not consulting on fundamentals of JARUS SORA, which have already been consulted on as part of the consultation above:
  - i) Underpinning internationally agreed terminology.
  - ii) Internationally agreed requirements (Annex B and Annex E) except where they differ from JARUS SORA version 2.5.
  - iii) Qualitative methods to determine ground risk.
- 1.4 This consultation seeks to gather feedback on the proposed differences between the JARUS version 2.5 of the Specific Operations Risk Assessment (JARUS SORA) and the proposed UK SORA.
- 1.5 Applications outside of the Specific category are not in scope of this consultation.

### Consultation terminology

- 1.6 In this consultation the following terms are used:
    - i) UK SORA refers to the United Kingdom (UK) version of SORA.
    - ii) JARUS SORA refers to the JARUS version of SORA.
    - iii) EASA SORA refers to the European Union Aviation Safety Agency (EASA) version of SORA.
    - iv) UK Regulation (EU) 2019/947 is used as the shortened way of referring to Regulation (EU) 2019/947 as assimilated into UK domestic law under the European Union (Withdrawal) Act 2018.
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- 1.7 During the implementation phase of UK SORA, the CAA will update the Master Glossary of Definitions and Abbreviations document CAP 722D with new terminology introduced by this policy once it is finalised.

### **Why are we introducing UK SORA?**

- 1.8 The introduction of UK SORA creates several potential benefits for the entire UAS industry ecosystem including the CAA such as:
- i) A more structured and less ambiguous risk assessment methodology framework benefiting applicants and the CAA.
  - ii) A clearer set of risk-based requirements for applicants to meet a target level of safety accepted by the CAA.
  - iii) The potential for the use of quantitative risk assessment methods resulting in a more measurable target level of safety in the future.
  - iv) Improvements to compliance with UK Regulation (EU) 2019/947 Article 11, by introducing and continuing to update the acceptable means of compliance (AMC) and guidance material (GM) to the regulation.

### **How will UK SORA be implemented?**

- 1.9 The JARUS SORA version 2.5 will be adapted for the UK operating environment and implemented in three significant phases:
- i) Phase 1 - consultation on the UK SORA differences proposal which includes this document and the UK SORA Methodology proposal [CAP3017](#).
  - ii) Phase 2 - development and publication of AMC and GM to UK Regulation (EU) 2019/947 Article 11, including the differences feedback where accepted.
  - iii) Phase 3 - implementation of the UK SORA based Application Service (also known as DiSCO) and UK SORA applications being accepted.
- 1.10 Estimated timings for the delivery of UK SORA are available on the CAA DiSCO project [webpage](#).

### **What are the differences to the JARUS SORA?**

- 1.11 Some of the main differences between the JARUS SORA and UK SORA are as follows:
- i) The UK SORA assurance requirements are different to consider the UK CAA's specific role as the competent authority, including third party validation, in relation to the JARUS generalised assurance model.
  - ii) The UK Air Risk model is specific to UK airspace.
  - iii) The UK SORA clearly defines the scope of third-party validation.
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- iv) The UK SORA clearly defines the requirements in Annex B and E, including improved wording and formatting.
- v) The UK SORA introduces a Specific Assurance and Integrity Level (SAIL) Mark policy for UAS. This policy incorporates UAS designers into the SORA process for compliance with the relevant technical requirements. This policy is currently being finalised.

### **UK SORA Robustness**

- 1.12 The CAA or [Recognised Assessment Entity \(Flightworthiness\) \(RAE\(F\)\)](#), will conduct a systematic assessment of some or all of the assurance requirements for a specific SAIL regardless of the required robustness level.
- 1.13 In UK SORA, the above assurance requirements are merged into a single requirement for all 3 levels of robustness. Low, medium, high robustness – the Applicant must provide compliance evidence to the CAA.
- 1.14 The CAA RPAS Policy and Sector Teams agreed in December 2023 that for low robustness, we will ask the Applicant to upload their compliance evidence. This decision was taken in the context of the UK SORA-based Application Service which makes the process of supplying compliance evidence quick and simple for applicants compared with a paper-based application system as seen in other jurisdictions.

### **Air risk model differences**

- 1.15 The key differences between the UK and JARUS SORA air risk models are as follows:
  - i) The UK initial Air Risk Class (ARC) flowchart focuses on encounter type, the airspace ruleset and whether the air environment is either *recognised* or contains *known traffic*.
  - ii) The UK initial ARC flowchart is to be used irrespective of whether airspace characterisation encounter rate data is available or not.
  - iii) Strategic and tactical mitigations have been updated to align with current UK CAA expectations, including specific reference to UK flight information services and military low flying coordination.

### **What are the differences to the EASA SORA**

- 1.16 Some of the main differences between the JARUS and UK versions of SORA can be found below:
  - i) The UK SORA will not require type certification in SAIL) V and VI.
  - ii) There will be no Design Verification Report (DVR) issued by the CAA.

- iii) The UK will use the recognised assessment entity (RAE) system to ensure remote pilot competence and flightworthiness.
- iv) The UK will introduce a SAIL Mark certificate.
- v) The European air risk model may have some differences based on Member States' airspace requirements.

**Will the UK SORA be internationally recognised?**

- 1.17 This is a matter for the States where UAS operators wish to operate outside of the UK. Currently there is no mutual recognition worldwide, as this would require bilateral agreements between the respective states governments to be signed. This is currently out of scope of this project.
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## CHAPTER 2

# Responding to this consultation

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## Next Steps

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Responses to this consultation can be submitted electronically using the CAA online consultation tool Citizen Space no later than **Friday 6 September 2024**.

Any enquiries regarding this consultation should be submitted via email to [uavenquiries@caa.co.uk](mailto:uavenquiries@caa.co.uk)

We will consider all responses and aim to publish a final version of this policy as AMC and GM by the end of Q4 2024.

### Why are we consulting?

It is important to the CAA that the public have an opportunity to voice their opinion on matters that could affect them. It is recognised that a public consultation provides a larger breadth of expertise and experience than contained within the CAA alone. There is also a legal requirement to consult when creating or amending AMC and GM, due to the legal status of these documents.

This document represents a significant publication that will impact all UAS operations within Specific Category. The CAA are keen to hear what you think about this draft version of UK SORA which will become AMC & GM.

## Consultation Details

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Given the length of the document being consulted on the CAA has chosen a mechanism of capturing feedback that allows for the simplest interrogation of the data.

To that end, each line or section within the document is sequentially numbered. If you identify an area you wish to provide feedback, please follow the steps below.

1. Select the question that corresponds to the correct section of the document e.g., 'Annex A'.
  2. Identify the line number or section that you wish to provide feedback on.
  3. Use the free text box to provide your feedback on that section, including any revised text that you wish to propose.
  4. Repeat for each piece of unique feedback that you wish to provide.
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