Safety and Airspace Regulation Group

UK Civil Aviation Authority

Unmanned Aircraft System Operations in UK Airspace: Abbreviations and Master Glossary

CAP 722D

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Contents

Revision history

Fourth Edition – Amendment 1 — 25 February 2025

Amendments to some abbreviations and removal of others, ahead of the launch of UK SORA shortly.
As this is a minor update, changes made in the fourth edition continue to be underlined in red.

Fourth Edition — 04 February 2025

Full document review and update.

Third Edition — 16 April 2024

Document update, including regulatory reference updates and an addition to the abbreviations section.

Second Edition — 7 December 2022

Full document review and update. Incorporates abbreviations and terms from a complete CAP 722 document series review, introducing Art 16: UAS Operations in the Framework of Model Aircraft Clubs and Associations and aligning with the new Acceptable Means of Compliance and Guidance Material to the Assimilated Regulation (EU) 2019/947.

First Edition — 16 October 2020

Foreword

Aim

CAP 722D is the abbreviations list and glossary of terms and for all documents in the CAP 722 series and is the single source of reference.
This document also contains additional abbreviations and terms that may be useful for the UAS Regulated Community.
This document does not replace definitions and abbreviations contained in relevant UAS Regulations

Content

The terminology relating to UAS operations continues to evolve and therefore the abbreviations and glossary of terms sections are not exhaustive.
Terms and definitions in this document are drawn from a combination of applicable UAS regulation, emerging ICAO definitions, EASA and other 'common use' terms which are considered to be acceptable alternatives. Where possible, a reference has been provided, in italics below the definition.

Availability

The latest version of CAP 722D can be located within the publications section of the CAA website.
Updated information can be found within thehttps://www.caa.co.uk/consumers/remotely-piloted-aircraft/our-role/updates-about-drones/ Updates about Drones section of the CAA website's UAS webpages.
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.

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Abbreviations

A

A2 CofC	A2 Certificate of Competency
AAIB	Air Accidents Investigation Branch
AAE	Atypical Air Environment
AAM	Advanced Air Mobility (JARUS SORA)
ACAS	Airborne Collision Avoidance System
ACP	Airspace Change Proposal
AD	Airworthiness Directive
ADS-B	Automatic Dependent Surveillance - Broadcast
ADQ	Aeronautical Data Quality
AEC	Airspace Encounter Categories (JARUS SORA)
AEH	Airspace Electronic Hardware (JARUS SORA)
AFIS	Aerodrome Flight Information Service
AGL	Above Ground Level
AIAA	Area of Intense Aerial Activity
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
Airprox	Air Proximity Hazard
AIS	Aeronautical Information System
ALARP	As Low As Reasonably Practicable
ALoSP	Acceptable Level of Safety Performance
AltMoC	Alternative Means of Compliance
AM	Accountable Manager
AMC	Acceptable Means of Compliance
AMSL	Above Mean Sea Level
ANO	Air Navigation Order
ANSP	Air Navigation Service Provider
AO	Airspace Observer

AOC	Air Operator Certificate
AOO	Area of Operation
APU	Auxiliary Power Unit
ARC	Air Risk Class (JARUS SORA)
AR Ops	Airspace Regulation Operations (CAA)
ASL	Above Surface Level
ASTM	American Society for Testing and Materials
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATM	Air Traffic Management
ATPL	Airline Transport Pilot Licence
ATS	Air Traffic Service
ATSU	Air Traffic Service Unit
ATZ	Aerodrome Traffic Zone
AUP	Airspace User Portal

B

BASA	Bilateral Aviation Safety Agreement
BGA	British Gliding Association
BMFA	British Model Flying Association
BITE	Built-In Test Equipment
BR	Basic Regulation
BRLOS	Beyond Radio Line of Sight
BSI	British Standards Institution
BVLOS	Beyond Visual line of Sight

C

C2	Command and Control
C3	Command, Control and Communication (JARUS SORA)
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAS	Controlled Airspace

CAT	Commercial Air Transport
CG	Centre of Gravity
CofA	Certificate of Airworthiness
CofC	Certificate of Conformance
ConOps	Concept of Operations
COR	Containment Requirements
COT	Containment Requirements (Tether)
COTS	Commercial Off-The-Shelf
CPL	Commercial Pilot Licence
Crit	Criterion
CRM	Crew Resource Management
CS	Certification Specification
CSP	Communication Service Provider
CTR	Control Zone
CU	Command Unit

D

DA	Danger Area (Airspace)
DA	Design Approval (Airworthiness)
DAA	Detect and Avoid
DAL	Design Assurance Level
DfT	Department for Transport
DG	Dangerous Goods
DMARES	Drone and Model Aircraft Registration and Education Service
DOA	Design Organisation Approval
DSCO	Digitalisation of the Specific Category Operations
DiSCO	Digitalisation of the Specific Category Operations (project overview)

E

EASA	European Union Aviation Safety Agency
EC	Electronic Conspicuity
EC	European Commission

ECCAIRS	European Co-ordination Centre for Accident and Incident Reporting Systems
ELS	Emergency Landing Site
EMI	Electromagnetic Interference
ENR (X.X)	En-Route (AIP section)
ENSF	Enhanced Non-Standard Flight
ERA	Emergency Response Action
ERF	Emergency Restriction of Flying
ERP	Emergency Response Plan
ESD	Electrostatic Discharge
ETSO	European Technical Standard Order (EASA)
EU	European Union
EUROCAE	European Organisation for Civil Aviation Equipment
EVLOS	Extended Visual Line of Sight
e-VTOL	Electric Vertical Take-Off and Landing

F

FAA	Federal Aviation Administration
FHSS	Frequency-Hopping Spread Spectrum
FIR	Flight Information Region
FIS	Flight Information Service
FISO	Flight Information Service Officer
FL	Flight Level
FLARM	Flight Alarm
FMC	Flight Management Computer
FMS	Flight Management System
FOD	Foreign Object Debris
FPV	First Person View
FRTOL	Flight Radio Telephony Operators' Licence
FRZ	Flight Restriction Zone
FSTD	Flight Simulation Training Device
FTB	Functional Test Based

FTS	Flight Termination System
FW	Fixed Wing

G

GA	General Aviation
GM	Guidance Material
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GRC	Ground Risk Class (JARUS SORA)
GVC	General VLOS Certificate

H

HALE	High Altitude Long Endurance
HF	Human Factors
HF	High Frequency (Radio Communication)
HIRF	Hight Intensity Radiated Field
HIRTA	High Intensity Radio Transmission Area
HLS	Helicopter Landing Site
HOD	Hook-On Device
HMI	Human-Machine Interface
HZ	Hertz

I

IAP	Instrument Approach Procedure
iARC	Initial Air Risk Class (JARUS SORA)
ICAO	International Civil Aviation Organisation
ICO	Information Commissioner’s Office
ID	Identification
IFP	Instrument Flight Procedures
IFR	Instrument Flight Rules
iGRC	Intrinsic Ground Risk Class (JARUS SORA)
IMC	Instrument Meteorological Conditions
IMSAFE	Illness, Medication, Stress, Alcohol, Fatigue, Emotion

IMU	Inertial Measurement Unit
IP	Ingress Protection
IR	UAS Implementing Regulation
ISA	International Standard Atmosphere
ISM	Industrial, Scientific, and Medical
ISO	International Organization for Standardisation
ITU	International Telecommunication Union

J

JARUS	Joint Authorities for Rulemaking on Unmanned Systems

K

KE	Kinetic Energy

L

LFA	Low Flying Area
LIDAR	Light Detection and Ranging
LMA	Large Model Association
LOA	Level of Assurance
LOC	Loss of Control
LODA	Letter of Design Approval
LOI	Level of Integrity
LUC	Light Unmanned Aircraft System Operator Certificate

M

MAA	Military Aviation Authority
MAC	Mid-Air Collision
MAMC	Military Airspace Management Cell
MASPS	Minimum Aviation System Performance Standards
MCC	Multi-Crew Coordination (JARUS SORA)
METAR	Meteorological Terminal Aviation Report
MOD	Ministry of Defence
MOPS	Minimum Operational Performance Specification
MOR	Mandatory Occurrence Report

MORS	Mandatory Occurrence Report Scheme
MoU	Memorandum of Understanding
MR	Multirotor
MSO	Multiple Simultaneous Operations
MTOM	Maximum Take-Off Mass

N

NAA	National Aviation Authority
NATS	National Air Traffic Services
NOTAM	Notice to Aviation
NM	Nautical Miles
NMAC	Near Mid-Air Collision
NSF	Non-Standard Flight

O

OAT	Outside Air Temperature
Ofcom	Office of Communications
OA	Operational Authorisation
OC	Operating Certificate
OM	Operations Manual
ORA	Operational Risk Assessment
OSC	Operating Safety Case (Legacy Term superseded by ORA)
OSD	On Screen Display
OSO	Operational Safety Objective

P

PBO	Performance-Based Oversight
PBR	Performance Based Regulation
PDRA	Pre-Defined Risk Assessment
PfCO	Permission for Commercial Operations (Legacy Term superseded by OA)
PSR	Primary Surveillance Radar
PTF	Permit to Fly

R

R	Requirement
R(TC)	Restricted Type Certificate
R&D	Research and Development
RA	Risk Assessment
RA(T)	Restricted Area (Temporary)
RADAR	Radio Detection and Ranging
RADALT	Radio Altimeter
RAE	Recognised Assessment Entity
RAE(F)	Recognised Assessment Entity for Flightworthiness
RCM	Remote Crew Member (JARUS SORA)
RCP	Required Communication Performance (JARUS SORA)
RF	Radio Frequency
RLOS	Radio Line of Sight
RLP	Required C2 Link Performance (JARUS SORA)
RMZ	Radio Mandatory Zone
RP	Remote Pilot
RPA	Remotely Piloted Aircraft
RPAS	Remotely Piloted Aircraft System
RPL	Remote Pilot's Licence
RPS	Remote Pilot Station (ICAO)
RPZ	Runway Protection Zone
RSMS	Regulatory Safety Management System
RT	Radiotelephony
RTCA	Radio Technical Commission for Aeronautics (US)
RTH	Return to Home
RTSA	Railway and Transport Safety Act

S

S&A	See and Avoid
SAA	Scottish Aeromodellers Association
SAIL	Specific Assurance and Integrity Level

SARPs	Standards and Recommended Practices
SARG	Safety and Airspace Regulation Group (CAA)
SB	Service Bulletin
SC	Safety Culture
SC	Special Conditions
SD	Safety Directive (CAA)
SERA	Standardised European Rules of the Air
SI	Statutory Instrument
SID	Standard Instrument Departure
SIL	Service Information Letter
SKU	Stock Keeping Unit
SLA	Service Level Agreement
SMM	Safety Management Manual
SMS	Safety Management System
SN	Safety Notice (CAA)
SOP	Standard Operating Procedure
SORA	Specific Operations Risk Assessment
SPI	Safety Performance Indicator
SPOF	Single Point of Failure
SPT	Safety Performance Target
SRG	Safety Regulation Group
SSD	Significant Standards Differences
SSR	Secondary Surveillance Radar
STANAG	Standardization Agreement
STAR	Standard Arrival Route
STC	Supplemental Type Certificate
STS	Standard Scenario (JARUS SORA)
SUA	Special Use Airspace
SUAAIS	Special Use Airspace Activity Information
SUACS	Special Use Airspace Crossing Service

SW	Software (JARUS SORA)

T

TAFOR	Terminal Area Forecast
TC	Type Certificate
TCB	Type Certification Basis
TCDS	Type Certificate Data Sheet
TCAS	Traffic Collision Avoidance System
TDA	Temporary Danger Area
TIP	Technical Implementation Procedures
TLOS	Target Level of Safety
TMPR	Tactical Mitigation Performance Requirements
TMZ	Transponder Mandatory Zone
TOAL	Take-Off and Landing
TOLA	Take-Off and Landing Area
TPM	Technical Procedures Manual
TRA	Temporary Reserved Area
TSA	Temporary Segregated Area
TSO	Technical Standard Order (FAA)
TTA	Tactical Training Area

U

UA	Unmanned Aircraft
UAM	Urban Air Mobility
UAS	Unmanned Aircraft System(s)
UHF	Ultra High Frequency
UIR	Upper Flight Information Region
UK	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
UTM	Uncrewed Aircraft System (UAS) Traffic Management

V

VFR	Visual Flight Rules

VHF	Very High Frequency
VLOS	Visual Line of Sight
VO	Visual Observer
VTOL	Vertical Take-Off and Landing
VMC	Visual Meteorological Conditions

W

WA	Working Arrangement

Glossary of terms

A

Abnormal Situation

An abnormal situation is an undesired state where it is no longer possible to continue the flight using SOPs. However, third parties on the ground or in the air are not in immediate danger. In this case contingency procedures must be applied to prevent a loss of control or excursion from the operational volume.
In an abnormal situation, the remote crew must attempt to return the operation back into the controlled state by executing contingency procedures as soon as practicable.

UK SORA

Acceptable Risk

The level of risk that individuals or groups are willing to accept given the benefits gained. Each organisation will have its own acceptable risk level, which is derived from its legal and regulatory compliance responsibilities, its threat profile, and its business/organisational drivers and impacts.

JARUS SORA

Accident

An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

a. a person is fatally or seriously injured as a result of:
   - being in the aircraft, or,
   - in direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or, direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b. the aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes) or minor damages to main rotor blades, tail

rotor blades, landing gear, and those resulting from hail or bird strike, (including holes in the radome); or

c. the aircraft is missing or is completely inaccessible.

Assimilated Regulation (EU) 996/2010, hereafter referred to as UK Regulation (EU) 996/2010

Accountable Manager (AM)

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 Safety Management System.

Adequate

What is necessary or sufficient for a specific requirement.

JARUS SORA

Adjacent Airspace

The adjacent airspace is the airspace where it is reasonably expected that an uncrewed aircraft may fly after a loss of control.

UK SORA

Adjacent Area

The adjacent area represents the ground are where it is reasonably expected a UA may crash after a loss of control situation. The adjacent area is calculated starting from the outer limit of the operational volume. The size of the adjacent area depends on the UA performance.

UK SORA

Aerodrome

A defined area, on land or on water, on a fixed, fixed offshore or floating structure, including any buildings, installations, and equipment thereon, intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

JARUS SORA

Aerodrome Environment

a. Aerodrome Environment is generally defined as: Class A, B, C, D, or E controlled airspaces which touch the surface with an aerodrome and/or controlled airspaces which do not touch the surface, but in connection to an aerodrome (normally depicted on aeronautical charts and sectionals); or
b. Any Mode C Veil (US) or TMZ (Europe) in Class A, B, C, D, or E, controlled airspace; or
c. 5 nautical miles from an airport having an operational control tower; or
d. 3 nautical miles from an airport with a published instrument flight procedure, but not an operational tower; or

e. 2 nautical miles from an airport without a published instrument flight procedure or an operational tower; or 2 nautical miles from a heliport with a published instrument flight procedure.

JARUS SORA

Aeronautical Information Circular (AIC)

A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative, or legislative matters.

ICAO Annex 15

Aeronautical Information Publication (AIP)

A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

ICAO Annex 15

Aircraft

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the Earth's surface.

Air Navigation Order (ANO)

The legal document established as a United Kingdom (UK) Statutory Instrument (SI) that is made for the purposes of regulating air navigation within the UK.

Airprox

A situation in which, in the opinion of a pilot or a controller, the distance between aircraft, as well as their relative positions and speed, was such that the safety of the aircraft involved was, or may have been, compromised.
ICAO Doc 4444: PANS - ATM

Air Risk Class (ARC)

The ARC is an initial assignment of generic collision risk of airspace before mitigations are applied. ARC is assigned to AEC based on qualitative assessment of collision risk of generic types of airspace.

JARUS SORA

Air Risk Model

Air Risk Model provides a holistic method to assess the risk of an air encounter, and to mitigate the risk that an encounter develops in a Mid-Air Collision. The Air Risk Model guides the operator, competent authority, and/or Air Navigation Service Provider (ANSP) in determining whether an operation can be conducted in a safe manner.

UK SORA

Aircraft

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the Earth's surface.

Aircraft Operating Manual

A manual, acceptable to the State of Operator, containing normal, abnormal, and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

JARUS SORA

Airspace Change Process

The staged process an airspace change sponsor follows to submit an airspace change to the CAA for a decision. Certain unmanned aircraft airspace restrictions are processed as an airspace change.

CAP 1616

Airspace Change Proposal (ACP)

Requests from a 'change sponsor', usually an airport or a provider of air navigation services (including air traffic control), to change the notified airspace design. Airspace change proposals must follow the CAA's airspace change process.

Airspace Classification

Airspace is broken down into different classes, defined by ICAO. In the UK, Classes A, C, D and E are controlled airspace and Class G is uncontrolled airspace. Classes B and F are currently unused in the UK.

Airspace Encounter Categories (AEC)

The AEC is a qualitative classification of the probability that a UAS would encounter a manned aircraft in typical civil airspace found in the U.S. and Europe. The airspace encounter risk was grouped by operational altitude, airport environment, controlled airspace, uncontrolled Mode C veil/TMZ airspace, and in uncontrolled airspace over rural and/or urban populations. The AEC is based on the assessment of the proximity (the more aircraft in the airspace, the higher the rate of proximity, the greater the risk of collision), geometry (an airspace structure which reduces the probability that an aircraft find themselves on collision courses), and dynamics (in general, the faster the speed of the aircraft in the airspace, the greater the number of collision risks over a set time). Airspace where there is a higher density of manned aircraft, few airspace structural controls, and high aircraft closing speeds, will experience higher airspace encounter rates than in airspace where there is low density, high airspace structure and slow speeds.

JARUS SORA

Airspace Manager

Airspace managers are responsible for temporary and/or permanent restricted airspace, such as flight restriction zones (FRZs), restricted airspace temporary (RAT), temporary danger areas (TDAs), danger areas, restricted areas, prohibited areas, low flying areas, helicopter routes and NOTAM.

UK SORA

Airspace 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.

Assimilated Regulation (EU) 2019/947 as retained (and amended in UK domestic law) Under the European Union (Withdrawal) Act 2018, hereafter referred to as UK Regulation (EU) 2019/947

Airworthiness

The condition of an item (aircraft, aircraft system, or part) in which that item operates in a safe manner to accomplish its intended function.

Airworthy

A UAS is airworthy if the aircraft and all its associated elements are in condition for safe operation.

Applicant

The applicant is the individual or organisation applying for an operational authorisation. The applicant must substantiate the safety of the operation by completing the UK SORA. Supporting material for the assessment may be provided by third parties (e.g., the designer of the UAS or equipment, UTM service providers, etc.).

UK SORA

Approved

Accepted by the certification authority as suitable for a particular purpose.

JARUS SORA

Approved Body

A conformity assessment body which has been approved by the Secretary of State under Article 18 of the UAS Delegated Regulation.

UAS Delegated Regulation (EU) 2019/945 as retained (and amended in UK domestic law) Under the European Union (Withdrawal) Act 2018, hereafter referred to as UK Regulation (EU) 2019/945.

As Low As Reasonably Practicable (ALARP)

A Risk can be said to be reduced to a level that is ALARP when the sacrifice of further reduction is “grossly disproportionate” to the decrease in Risk that would be achieved. This sacrifice may include more than just financial cost and will include the time and trouble involved in taking measures to avoid that Risk. Therefore, an ALARP argument must balance the “sacrifice” (in time, money or effort) of possible further Risk reduction measures with their expected safety benefit (incremental reduction in Risk exposure). The balance must be weighted in favour of safety, with a greater “disproportion factor” for higher levels of Risk exposure.

Assemblies of People

Gatherings where persons are unable to move away due to the density of the people present.

UK Regulation (EU) 2019/947

Assurance

The planned and systematic actions necessary to provide adequate confidence that a product or process satisfies given requirements.

Atypical Air Environment (AAE)

An atypical air environment (AAE) is not a separate classification of airspace, and it can exist within any classification of airspace. Broadly, it can be considered to be a volume of airspace in which it can be reasonably anticipated for there to be an ‘improbable encounter rate’ with crewed air traffic due to the proximity of certain ground infrastructure rendering it hazardous for most traditional forms of aviation.

UK SORA

Authorised Representative

Any natural or legal person established in the United Kingdom who has received a written mandate from a manufacturer to act on his behalf in relation to specified tasks.

UK Regulation (EU) 2019/945

Automatic (Function)

The execution of predefined processes or events that do not require direct UAS crew initiation and/or intervention.

Autonomous Aircraft

An unmanned aircraft that does not allow pilot intervention in the management of the flight.

ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Autonomous Operation

An operation during which an unmanned aircraft operates without the remote pilot being able to intervene.

UK Regulation (EU) 2019/947

B

Barrier

A material object or set of objects that separates, demarcates, or services as a barricade; or something immaterial that impedes or separates. Both physical and non-physical barriers are utilised and applied in hazard control, i.e. anything used to control, prevent, or impede unwanted adverse energy flow and / or anything used to control, prevent or impede unwanted event flow.

Beyond Visual Line of Sight (BVLOS)

A type of UAS operation which is not conducted in VLOS.

UK Regulation (EU) 2019/947

C

Catastrophic

Failure conditions that could result in one or more fatalities.

Cause

Something that brings about an event; a person or thing that is the occasion of an action or state; a reason for an action or condition.

Certificate

Any certificate, approval, licence, authorisation, attestation, or other document issued as the result of a certification attesting compliance with the applicable requirements.

Assimilated Regulation (EU) 2018/1139 as retained (and amended in UK domestic law) Under the European Union (Withdrawal) Act 2018, hereafter referred to as UK Regulation (EU) 2018/1139

Certification

Any form of recognition in accordance with the UK Regulation (EU) 2018/1139, based on an appropriate assessment, that a legal or natural person, product, part, non-installed equipment, equipment to control unmanned aircraft remotely, aerodrome, safety-related aerodrome equipment, ATM/ANS system, ATM/ANS constituent or flight simulation training device complies with the applicable requirements of this Regulation and of the delegated and implementing acts adopted on the basis thereof, through the issuance of a certificate attesting such compliance.

UK Regulation (EU) 2018/1139

Certification Specifications (CS)

Non-binding technical standards adopted by the CAA to meet the essential requirements of the Basic Regulation. CSs are used to establish the certification basis (CB) as described below. Should an aerodrome operator not meet the recommendation of the CS, they may propose an Equivalent Level of Safety (ELOS) that demonstrates how they meet the intent of the CS. As part of an agreed CB, the CS become binding on an individual basis to the applicant.

Certified Category

A category of UAS operation that is described in Article 3 of the UAS Implementing Regulation.

Certified Equipment

Considered to be any equipment for which the relevant design organisation has demonstrated compliance with the applicable certification specifications and received a form of recognition from the CAA that attests such compliance (e.g., a TSO approval).

GM1 UAS.SPEC.100 to UK Regulation (EU) 2019/947

Civil Aircraft

Aircraft other than public/state or military aircraft

JARUS SORA

Collision Avoidance

Averting physical contact between an aircraft and any other object or terrain.

Command and Control (C2) Link

The data link between the remotely piloted aircraft and the Remote Pilot Station for the purposes of managing the flight.

Note: Remote Pilot Station is a legacy term and has been replaced by Command Unit.

ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Command and Control (C2) Link Service

A communication service supplied by and third party, providing Command and Control between the unmanned aircraft and the Command Unit.

UK Regulation (EU) 2019/947

Command Unit (CU)

The equipment or system of equipment to control unmanned aircraft remotely as defined in point 32 of Article 3 of Regulation (EU) 2018/1139 which supports the control or the monitoring of the unmanned aircraft during any phase of flight, with the exception of any infrastructure supporting the command and control (C2) link service.

Note: Command Unit is now the preferred term and replaces Ground Control Station and Remote Pilot Station. CAA UAS Unit documents containing these terms will be updated in due course.

UK Regulation (EU) 2019/947

Commercial/Components Off-The-Shelf (COTS)

Components designed to be implemented into existing systems without extensive customisation and for which design data are not always available to the customer.

JARUS SORA

Competent third party

The party other than the competent authority that is responsible for reviewing supporting evidence for mitigations and operational safety objectives of an application. The competent authority may appoint organisations that perform this task for all or a selection of review items. The competent authority may also decide to perform this task by themselves, thus becoming itself the competent third party.

JARUS SORA

Complexity

An attribute of systems or items which makes their operation difficult to comprehend. Increased system complexity is often caused by such items as sophisticated components and multiple interrelationships.

JARUS SORA

Compliance

Successful performance of all mandatory activities; agreement between the expected or specified result and the actual result.

JARUS SORA

Compliance Approach

A high-level description of how the OA Applicant intends to comply with the SORA requirements. It is an extension of the compliance matrix (see definition for compliance basis) with added columns, where the OA Applicant provides against each requirement a brief statement of the compliance method (one sentence suffices) and the expected evidence documents (generic document titles suffice). The actual compliance data and documents are not required at this stage. Where a requirement is satisfied through a SAIL mark certificate, the OA Applicant writes a simple statement such as “compliance demonstrated by the SAIL mark certificate”.

RAE(F) Policy

Compliance Basis

List of all SORA requirements which the OA Applicant must comply with to obtain an OA for their intended operation. The list includes requirements that are already complied with through a SAIL mark certificate, and identifies such requirements as already complied with. The compliance basis takes the form of a spreadsheet called the ‘compliance matrix’, where each requirement is identified in a single row.

RAE(F) Policy

Compliance Evidence

Physical proof that compliance with a requirement has been achieved. Examples are technical drawing, analysis report, flight test report, operational procedure, SAIL mark certificate, etc.

RAE(F) Policy

Compliance Statement

A compliance statement is a simple statement (a single sentence typically suffices) which describes the method through which the Applicant has complied with the requirement.

UK SORA

Component

Any self-contained part, combination of parts, subassemblies, or units which perform a distinct function necessary to the operation of the system.

JARUS SORA

Concept of Operations (ConOps)

Describes the characteristics of the organisation, system, operations and the objectives of the user.

Configuration

The requirements, design and implementation that define a particular version of a system or system component.

JARUS SORA

Configuration Control/Management

The process of evaluating, approving, or disapproving, and coordinating changes to configuration items after formal establishment of their configuration identification.

JARUS SORA

Conformity

Aircraft or part checked against design documents for correctness.

JARUS SORA

Conformity Assessment

The process demonstrating whether the specified requirements relating to a product have been fulfilled.

UK Regulation (EU) 2019/945

Conformity Assessment Body

A body that performs conformity assessment activities including calibration, testing, certification and inspection.

UK Regulation (EU) 2019/945

Congested Area

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

Consensus Standard

Consensus standards are industry developed standards that define minimum safety and performance requirements of an acceptable product or a means of compliance to specific requirements. Standards organisations include, but are not limited to, the Radio Technical Commission for Aeronautics (RTCA), SAE International (SAE), ASTM International (ASTM), and the European Organisation for Civil Aviation Equipment (EUROCAE).

JARUS SORA

Containment

Containment consists of technical and operational mitigations that are intended to contain the flight of the UA within the defined operational volume and ground risk buffer to reduce the likelihood of an LOC, resulting in an operational volume excursion.

UK SORA

Containment Requirements (COR)

Containment requirements are driven by the difference between the ground risk level in the operational volume, including the ground risk buffer, and the ground risk level in the adjacent area.

UK SORA

Containment Requirements Tether (COT)

Determination of containment requirements addresses the risk posed by an operational loss of control that may infringe on areas adjacent to the operational volume and buffers, specifically for the use of a tether.

UK SORA

Contingency Area

The projection of the contingency volume on the surface of the earth.

UK Regulation (EU) 2019/947

Contingency Procedures

Contingency procedures are designed to prevent a loss of control that has an increased likelihood of occurring due to the current abnormal situation. These procedures should return the operation to a controlled state and the use of SOP's or allow the safe termination of the flight.

Contingency procedures must be activated as soon as the UA deviates from its intended flight path or behaves abnormally, to prevent it leaving the operational volume.

If contingency procedures cannot rectify the abnormal situation or the UA approaches the outer edge of the contingency volume, emergency procedures must be applied to safely terminate the flight.

UK SORA

Contingency Volume

The contingency volume surrounds the flight volume. Entry into the contingency volume is always considered an abnormal situation and requires the execution of appropriate contingency procedures to return the UA to the flight volume.

UK SORA

Continued Airworthiness

The monitoring, reporting and corrective action processes used for in-service aircraft to assure they maintain the appropriate safety standard defined during the initial airworthiness processes throughout their operational life.

Continuing Airworthiness

The set of processes by which an aircraft, engine, propeller, or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

ICAO Annex 8

Controlled Airspace

An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note: Controlled airspace is a generic term which covers Classes A, C, D and E airspace in the UK.

ICAO Annex 11

Controlled Ground Area

The ground area where the UAS is operated and within which the UAS operator can ensure that only involved persons are present.

UK Regulation (EU) 2019/947

Cooperative Aircraft

Aircraft that have an electronic means of identification (i.e., a transponder) aboard and operating.

JARUS SORA

Critical (Function)

A function whose loss would prevent the continued safe flight and landing of the unmanned aircraft (UA).

JARUS SORA

Critical Area

The ground area where persons would be expected to be impacted by the UA in the event of a loss of control or an unplanned landing.

JARUS SORA

Critical Infrastructure

Systems and assets vital to national defence, national security, economic security, public health or safety including both regional and national infrastructure.

JARUS SORA

Critical Systems

Systems needed to perform one or more safety functions, in which failure would cause a significant increase in the safety risk for the third parties and/or environment involved.

JARUS SORA

D

Danger Area (DA)

Airspace which has been notified as such within which activities dangerous to the flight of aircraft may exist at specified times.

ICAO Annex 11

Dangerous Goods (DG)

Articles or substances, which are capable of posing a hazard to health, safety, property or the environment in the case of an incident or accident, that the unmanned aircraft is carrying as its payload, including in particular:

a. explosives (mass explosion hazard, blast projection hazard, minor blast hazard, major fire hazard, blasting agents, extremely insensitive explosives);

b. gases (flammable gas, non-flammable gas, poisonous gas, oxygen, inhalation hazard);

c. flammable liquids (flammable liquids; combustible, fuel oil, gasoline);

d. flammable solids (flammable solids, spontaneously combustible solids, dangerous when wet);

e. oxidising agents and organic peroxides;

f. toxic and infectious substances (poison, biohazard);

g. radioactive substances;

h. corrosive substances;

UK Regulation (EU) 2019/947

Datalink

A term referring to all interconnections to, from and within the remotely piloted aircraft system. It includes control, flight status, communication, and payload links.

JARUS SORA

Declaration

A formally and legally binding statement.

Oxford Dictionary

Demonstration

A method of proof of performance by observation.

JARUS SORA

Designated Standard

A technical standard:

a. which is adopted by the British Standards Institution for repeated or continuous application; and

b. which has been designated by the Secretary of State by publishing its reference number in a manner the Secretary of State considers appropriate.

UK Regulation (EU) 2019/945

Designer

The legal person or design and production organisation responsible for the development and manufacture of a UAS.

UK SORA

Detect and Avoid (DAA)

The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action to comply with the applicable rule of the air.

ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Direct Remote Identification

A system that ensures the local broadcast of information about a UA in operation, including the marking of the UA, so that this information can be obtained without physical access to the UA.

UK Regulation (EU) 2019/945

Distributor

Any natural or legal person in the supply chain, other than the manufacturer or the importer, who makes a product available on the market.

UK Regulation (EU) 2019/945

E

Economic Operators

The manufacturer, the authorised representative of the manufacturer, the importer, and the distributor of the UAS.

UK Regulation (EU) 2019/945

Electronic Conspicuity (EC)

Electronic Conspicuity (EC) is an umbrella term for a range of technologies that can help airspace users to be more aware of other aircraft in the same airspace.

Emergency Procedures

Emergency procedures must be executed whenever an LOC is entered, even if it is within the operating volume. They are executed the remote crew and may be supported by automated features of the UAS (or vice versa) and are intended to mitigate the effect of failures that cause or could lead to an unsafe outcome. Regardless of other actions and response by the flight crew, the emergency procedures must always be executed before crossing the outer edge of the contingency volume, which would otherwise result in an operational volume excursion.

UK SORA

Emergency Recovery Capability (ERC)

UAS safety feature that provides for the cessation UA flight in a manner that minimises risk to persons on the ground, other airspace users and critical infrastructure.

JARUS SORA

Emergency Response Plan (ERP)

The ERP is used for coordinating all activities needed to respond to incidents and accidents. It is different from emergency procedures, as it does not deal with LOC, but actions to be taken afterwards.

UK SORA

Environment

a. The aggregate of operational and ambient conditions to include the external procedures, conditions, and objects that affect the development, operation, and maintenance of a system. Operational conditions include traffic density, communication density, workload, etc. Ambient conditions include weather, EMI, vibration, acoustics, etc.

b. Everything external to a system which can affect or be affected by the system.

JARUS SORA

Equipment

A complete assembly - operating either independently or within a system/sub-system - that performs a specific function.

JARUS SORA

Equipment to Control Unmanned Aircraft Remotely

Any instrument, equipment, mechanism, apparatus, appurtenance, software or accessory that is necessary for the safe operation of an unmanned aircraft, which is not a part, and which is not carried on board of that unmanned aircraft.

UK Regulation (EU) 2018/1139

Evaluate

A comprehensive review of an applicant's UAS and all associated elements of the system. The applicant is expected to provide all information necessary to allow the CAA to objectively determine if the aircraft can be safely operated in accordance with the proposed ConOps.

F

Failure

An event which affects the operation of an item such that it can no longer function as intended.

JARUS SORA

Failure Condition

A condition having an effect on the UAS, both direct and consequential, which is caused or contributed to by one or more failures. Where relevant, a failure condition should consider flight phases (Take-off, climb, cruise, descent, approach, landing), adverse operational conditions, adverse environmental conditions, or external events where they may trigger, contribute to, or worsen the effect of the failure condition.

Failure Mode

The way an item fails to perform its intended function, i.e. the externally observable manifestation of the item failure.

JARUS SORA

Fatal Injury

An injury which is sustained by a person in an accident, and which results in his or her death within 30 days of the date of the accident.

UK Regulation (EU) 996/2010

Flight Geography

The volume within which the UAS operator plans to conduct the operation under normal operating procedures. See also point 1.4(e) of SORA main body.

JARUS SORA

Flight Level

'Flight Level' is defined by a surface of constant atmospheric pressure which is related to a specific pressure datum, 1013,2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

UK Standardised Rules of the Air Article 2

Flight Manual

A manual containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

JARUS SORA

Flight Restriction Zone (FRZ)

Airspace of defined dimensions around a protected aerodrome consisting of the aerodrome traffic zone, any runway protection zones, and any additional boundary

zones, within which the permission of the relevant ATS unit or aerodrome operator, as appropriate, is required before a UAS flight can take place.
ANO 2016: Articles 94A and 94B

Flight Termination System (FTS)

Flight Termination system is a procedure or function which aims to immediately end the flight.

Flight Volume

For normal operations, the UA shall only operate inside the flight volume using standard operating procedures.
Depending on the type of operation, the flight volume can be defined as a flight corridor for each planned trajectory, a larger volume to allow for a multitude of similar flights with changing flight paths, or a set of different flight volumes fulfilling specific conditions.
UK SORA

Flyaway

A condition due to loss of control of the operation, where the UAS is leaving the operational volume and it is not possible to regain control of the UA with none of the normal, contingency, or emergency procedures being effective.
JARUS SORA

Follow-Me Mode

A mode of operation of a UAS where the unmanned aircraft constantly follows the remote pilot within a predetermined radius.
UK Regulation (EU) 2019/947

Frangibility

The property of a material through deformation to tend to break into fragments rather than deforming elastically or plastically and retaining its cohesion as a single object.

Frequency

The number of times that something happens during a particular period.
JARUS SORA

G

Geo-Awareness

A function that, based on the data provided by the CAA, detects a potential breach of airspace limitations, and alerts the remote pilots so that they can take immediate and effective action to prevent that breach.

UK Regulation (EU) 2019/947

Geo-Fencing

An automatic limitation of the airspace a UA can enter.

Geographical Zone

A UAS Geographical zone is an airspace restriction, established under Article 15.

UK Regulation (EU) 2019/947

Go

Parameters are such that the UAS Operation may proceed.

CAP2606

Ground Risk Buffer

The ground risk buffer is an area on the ground that surrounds the footprint of the contingency volume. If the UA exists the contingency volume during a loss of control of the operation, it should end its flight within the ground risk buffer. The size of the ground risk buffer is based on the individual risk of an operation and is driven by the flight characteristics of the UA and the containment requirements.

UK SORA

intrinsic Ground Risk Class (iGRC)

The intrinsic Ground Risk Class (scaled from 1 to 10) is determined by the UA characteristics (maximum characteristic dimension and maximum speed) as well as the at-risk population density in the operational volume and ground risk buffer.

JARUS SORA

Intrinsic Ground Risk Class Footprint

The defined ground area at risk for a specific operation

UK SORA

Final Ground Risk Class

The Final Ground Risk Class is determined based on any mitigation measures put in place, which may have a significant effect on the likelihood of a fatality after loss of control of the operation, including:
Strategic mitigations intended to reduce the risk before flight,
Tactical mitigations intended to reduce the risk during flight,
Mitigations intended to reduce the effect of a ground impact.

JARUS SORA

Guaranteed Sound Power Level

A sound power level determined in accordance with the requirements laid down in Part 13 of the Annex which includes the uncertainties due to production variation and measurement procedures and where the manufacturer, or his authorised representative, confirms that according to the technical instruments applied and referred to in the technical documentation it is not exceeded.

UK Regulation (EU) 2019/945

Guidelines

Recommended procedures for complying with regulations.

H

Handover

The act of passing piloting control from one remote pilot station to another.

ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Hardware

An object that has physical being. Generally, refers to LRUs, circuit cards, power supplies etc.

JARUS SORA

Harm

The term harm, for the purpose of the SORA, relates to undesired events defined as:

a. Fatal injuries to third parties on the ground.

b. Fatal injuries to third parties in the air (Catastrophic MAC with a manned aircraft)

c. Damage to critical infrastructure.

JARUS SORA

Harm Identification

The identification of the harm for which the risk needs to be assessed. For the purposes of the SORA three categories of harm have been identified:

a. Fatal injuries to third parties on the ground.

b. Fatal injuries to third parties in the air (Catastrophic MAC with a manned aircraft)

c. Damage to critical infrastructure.

JARUS SORA

Harm Likelihood Estimation

The estimation (qualitative or quantitative) of the likelihood of the retained harm.

JARUS SORA

Hazard

The condition, object or activity with the potential of causing injuries to personnel, damage to equipment or structures, loss of material or reduction of ability to perform a prescribed function.

ICAO Doc 9859: Safety Management Manual

Height

The vertical distance of a level, a point or an object considered as a point measured from a specified datum.

ICAO Annex 5

High Authority

Those systems that can evaluate data, select a course of action and implement that action without the need for human input.

Highly Automated

Those systems that still require inputs from a human operator (e.g. confirmation of a proposed action) but which can implement the action without further human interaction once the initial input has been provided.

Holistic

Characterised by comprehension of the parts of something as intimately interconnected and explicable only by reference to the whole.

JARUS SORA

Holistic Risk Model

Provides a generic framework to identify the threats, hazards, and controls applicable to any UAS operation.

JARUS SORA

Hovering

Staying in the same geographical position in the air.

UK Regulation (EU) 2019/945

Human Error

Human action with unintended consequences.

JARUS SORA

Human Factors (HF)

Human-machine interface issues with UAS control station displays, controls, functionality, automation, operator workload and system maintainability.

JARUS SORA

Human Factors Principles

Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

JARUS SORA

Human Performance

Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

JARUS SORA

I

Importer

Any natural or legal person established in the United Kingdom who places a product from a third country on the United Kingdom market.

UK Regulation (EU) 2019/945

Incident

An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

UK Regulation (EU) 996/2010

Industry Standard

A published document established by consensus and approved by a recognized body that sets out specifications and procedures to ensure that a material, product, method, or service meets its purpose and consistently performs to its intended use.

Standards are industry developed standards that define minimum safety and performance requirements of an acceptable product or a means of compliance to specific requirements.

JARUS SORA

Initial Air Risk Class (iARC)

Initial classification of the airspace before risk mitigations are applied.

JARUS SORA

Initial Airworthiness

The system used to determine the applicable requirements and establish that an aircraft design is demonstrated to be able to meet these requirements.

Inspection

An examination of an item against a specific standard.

Instrument Flight Procedures

A standard instrument departure (SID), a standard instrument arrival (STAR), an approach transition, an initial approach procedure and an instrument approach procedure (IAP)

CAP 785A

Intrinsic Ground Risk Class (iGRC)

Initial classification of the ground risk before ground mitigations are applied.

JARUS SORA

Integrity

Attribute of a system or an item indicating that it can be relied upon to work correctly on demand.

JARUS SORA

Involved Person

Person directly involved with the operation of the UAS or fully aware that the UAS operation is being conducted near them. Involved persons are fully aware of the risks involved with the UAS operation and have accepted these risks. The UAS operator informs Involved persons of the risks and provides training on the relevant emergency procedures and/or contingency plans.

JARUS SORA

J

Just Culture

Culture in which front-line operators or other persons are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but in which gross negligence, wilful violations and destructive acts are not tolerated.

Assimilated Regulation (EU) 376/2014 as retained (and amended in UK domestic law) Under the European Union (Withdrawal) Act 2018, hereafter referred to as UK Regulation (EU) 376/2014 (Article 2)

K

Kinetic Energy

Kinetic energy is energy of an object due to its motion. It is directly related to the mass or weight of the objective. Kinetic Energy = ½ Mass x Velocity^2.

JARUS SORA

L

Large Model Aircraft

A model aircraft with a maximum take-off mass greater than 25Kg.

Latency

This is defined by the time it takes for a request to travel from the transmitter (Command Unit) to the receiver (UA) and for the receiver to process that request. This is the total round-trip time from the Command Unit to the UA and back again. In reliable two-way communication systems, latency limits the maximum rate that information can be transmitted.

Legal Person

An individual, company, or other entity which has legal rights and is subject to obligations.

Light UAS Operator Certificate (LUC)

A certificate issued to a UAS operator by the CAA as set out in Part C of the Annex to the UAS Implementing Regulation.

UK Regulation (EU) 2019/947

Likelihood

Estimation of the degree of confidence one may have in the occurrence of an event.

JARUS SORA

Likelihood Estimation

The estimation (qualitative or quantitative) of the likelihood of the retained undesired event's harm.

JARUS SORA

Loss of Control (LOC) of the operation

A Loss of Control (LOC) typically has the following characteristics:

i) It could not be handled by a contingency procedure.

ii) ii) The safe outcome of the situation relies highly on luck.

This includes situations where a UA has exited the operational volume and is potentially operating over or in an area of ground or air risk for which the UAS operator is not authorised. The LOC state is also entered if a UA does not follow the authorised route and the remote pilot is unable to control it, an automatic failsafe is initiated, or the Flight Termination System (FTS) is activated, even if this happens inside the operational volume.

UK SORA

Lost C2 Link

The loss of Command-and-Control link with the remotely piloted aircraft such that the remote pilot can no longer manage the aircraft's flight.

ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

M

Maintenance

Inspection, overhaul, repair, preservation, and the replacement of parts.

JARUS SORA

Maintenance Staff

Ground personnel in charge of maintain the UAS before and after flight in accordance with the UAS maintenance instructions.

UK SORA

Making Available on the Market

Any supply of a product for distribution, consumption or use on the United Kingdom market in the course of a commercial activity, whether in exchange of payment or free of charge.

UK Regulation (EU) 2019/947

Malfunction

The occurrence of a condition whereby the operation is outside specified limits.

JARUS SORA

Manufacturer

Any natural or legal person who manufactures a product or has a product designed or manufactured and markets that product under their name or trademark.

UK Regulation (EU) 2019/945

Market Surveillance

Activities carried out and measures taken by public authorities to ensure that products comply with the requirements set out in any relevant enactment and do not endanger health, safety or an any other aspect of public interest protection.

UK Regulation (EU) 2019/945

Market Surveillance Authority

An authority responsible for carrying out market surveillance in the United Kingdom.

UK Regulation (EU) 2019/945

Maximum Population Density

The number of people living per unit of an area (e.g., per square mile or square km).

JARUS SORA

Maximum Speed

This is defined as the maximum possible airspeed the UA can achieve, as specified by its Designer. It is important to note that this refers to the potential maximum speed, not the maximum speed of the proposed operation.

UK SORA

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.

UK Regulation (EU) 2019/947

Measured Sound Power Level

A sound power level as determined from measurements as laid down in Part 13 of the Annex; measured values may be determined either from a single UA representative for the type of equipment or from the average of a number of UA.

UK Regulation (EU) 2019/945

Methodology

A set of methods and principles used to perform a particular activity.

JARUS SORA

Mid-Air Collision (MAC)

An accident where two aircraft come into contact with each other while both are in flight.

JARUS SORA

Minimum Aviation System Performance Standards (MASPS)

A MASPS specifies characteristics that should be useful to designers, installers, manufacturers, service providers and users of systems intended for operational use within a defined airspace. Where the systems are global in nature, the system may have international applications that are taken into consideration. The MASPS describes the system (subsystems / functions) and provides information needed to understand the rationale for system characteristics, operational goals, requirements and typical applications. Definitions and assumptions essential to proper understanding of the MASPS are provided as well as minimum system test procedures to verify system performance compliance (e.g., end-to-end performance verification).

JARUS SORA

Minimum Operational Performance Specification (MOPS)

A MOPS provides standards for specific equipment(s) useful to designers, manufacturers, installers and users of the equipment. The word "equipment" used in a MOPS includes all components and units necessary for the system to properly perform its intended function(s). The MOPS provides the information needed to understand the rationale for equipment characteristics and requirements stated. The MOPS describes typical equipment applications and operational goals and establishes the basis for required performance under the standard. Definitions and assumptions essential to proper understanding are provided as well as installed equipment tests and operational performance characteristics for equipment installations.

JARUS SORA

Mitigation

A means to reduce the risk of a hazard.

JARUS SORA

Model Aircraft

An unmanned aircraft used for sporting and recreational purposes, flown by direct control inputs made by the remote pilot without any autonomous capability other than for flight stabilisation purposes.

Note: The definition of a model aircraft may include multi-rotor type drones. Any unmanned aircraft being flown in accordance with the definition above is

considered a model aircraft. The use of any automation, such as automatic flight modes which alter the position of the aircraft, places the operation outside the definition of a model aircraft, and therefore outside the scope of Article 16. The aircraft **must** be flown with direct control inputs from the remote pilot.
It is acknowledged that many unmanned aircraft have built in failsafe modes, which may be activated in some instances, for example- loss of control link. Activation of such a mode, although possibly automatic in nature, does not necessarily place the aircraft outside the scope of the definition of a model aircraft.
Appendix A: GM1 Article 16 to UK Regulation (EU) 2019/947

Model Aircraft Club or Association

An organisation legally established in the United Kingdom for the purpose of conducting leisure flights, air displays, sporting activities or competition activities using UAS.
UK Regulation (EU) 2019/947

Model Aircraft Flying Display

Any flying activity deliberately performed, by model aircraft, for the purpose of providing an exhibition or entertainment at an advertised event.
UK Regulation (EU) 2019/947

Multiple Simultaneous Operations (MSO)

UA operations where multiple UAs are under a common (centralized) flight management and the individual UA's either:

- operate relative to each other under the common flight management, (e.g., formation flights with a swarm of UAS performing displays for entertainment) or
- operate independent of each other under the common flight management.

JARUS SORA

N

National Aviation Authority (NAA)

Also referred as civil aviation authority, it is a government statutory authority in each country that oversees the approval and regulation of civil aviation.
JARUS SORA

Natural Person

A human being as distinguished from a person (as a corporation) created by operation of law.

Near Mid-Air Collision (NMAC)

An NMAC is defined as two aircraft coming within 500 vertical and ±100 ft. horizontally of each other while in flight.
JARUS SORA

Night

The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority. Note: Civil twilight degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

JARUS SORA

No Go

Parameters are such that the UAS Operation may not proceed.

CAP2606

Notice to Aviation (NOTAM)

A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

ICAO Annex 11

Normal Operation

Normal operations utilise standard operating procedures (SOP), which are a set of operating instructions covering policies, procedures, and responsibilities set out by the applicant.

UK SORA

O

OA Applicant

Applicant to an operational authorisation delivered by the CAA.

CAP722J

Occurrence

Any safety-related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person and includes in particular an accident or serious incident.

UK Regulation (EU) 996/2010

Open Category

A category of UAS operations that is described in Article 4 of the UAS Implementing Regulation.

Operating Safety Case (OSC)

A risk assessment methodology intended for use in the Specific category, which is described in CAP 722A.

UK Regulation (EU) 2019/947

Operation Control States

The UK SORA considers an operation to be either in a state of control, or loss of control.

UK SORA

Operation In Control

An operation is considered in control when the remote crew can continue the management of the current flight situation, such that no persons on the ground or in the air endangered. This remains true for both normal and abnormal situation. However, the safety margins in the abnormal situation are reduced. There are two state of operation in control:

UK SORA

Operational Authorisation (OA)

A document issued by the CAA that authorises the operation of an unmanned aircraft system, subject to the conditions outlined within the authorisation, having taken into account the operational risks involved.

Operational Life

It is defined by the UAS design organisation as the maximum flight hours and/or cycles an UAS operator should use the UAS while continuously conforming with the maintenance design requirements.

JARUS SORA

Operational Risk Assessment (ORA)

See Operating Safety Case.

Operational Volume

The operational volume is made up of the flight volume and the contingency volume.

UK SORA

Operations Manual (OM)

A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties (See CONOPS).

JARUS SORA

Operator

See unmanned aircraft system operator.

Oversight

The verification, by or on behalf of the competent authority, on a continuous basis that the requirements of this Regulation and of the delegated and implementing acts adopted on the basis thereof, on the basis of which a certificate has been issued or in respect of which a declaration has been made, continue to be complied with.

UK Regulation (EU) 2018/1139

P

Parachute

A device used or intended to be used to retard the fall of a body or object through the air.

JARUS SORA

Payload

Instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is installed in or attached to the aircraft, and is not used or intended to be used in operating or controlling an aircraft in flight, and is not part of an airframe, engine, or propeller.

UK Regulation (EU) 2019/947

Performance Based Oversight (PBO)

There are two primary functions of the Performance Based Oversight (PBO) approach:

1. To consistently, proportionately, and efficiently allocate the use of our operational safety oversight teams or 'field force'
2. To modify the volume, type and focus of our oversight according to risk and organisational performance

The PBO process allows Sector Managers from each capability area to use the information gleaned from oversight and other safety intelligence sources to build a single cross-capability risk picture, covering all operational aspects of each regulated entity.

Pilot

See Remote Pilot.

Placing on the Market

The first making available of a product on the United Kingdom market.

UK Regulation (EU) 2019/945

Population Density

The number of people living per unit of an area (e.g. per square mile); the number of people relative to the space occupied by them.

JARUS SORA

Practice

Recommended methods, rules, and designs for voluntary compliance.

JARUS SORA

Pre-Defined Risk Assessment (PDRA)

A PDRA is a shortened set of prescriptive conditions that must be complied with by a UAS operator in order to conduct a pre-determined type of operation.

Privately Built UAS

A UAS assembled or manufactured for the builder's own use, not including UAS assembled from a set of parts placed on the market by the manufacturer as a single ready-to-assemble kit.

UK Regulation (EU) 2019/947

Procedure

Standard, detailed steps that prescribe how to perform specific tasks.

JARUS SORA

Process

Set of inter-related resources and activities, which transform inputs into outputs.

JARUS SORA

Prohibited Area

An airspace of defined dimensions over the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

ICAO Annex 11

Protected Aerodrome

A CAA certified aerodrome or a UK Government aerodrome or other aerodromes prescribed for the purpose (by the Secretary of state) in relation to a Flight Restriction Zone.

Air Navigation Order

Providence

Providence is a necessary byproduct to make experimentation and computational factors more clear-cut and easy to evaluate and calculate. Providence can be simply thought of as pure chance, it is the point at which, in the collision sequence, all other modes of mitigation have failed, and neither the pilot, the DAA system, nor ATC, can have any influence on whether the two-aircraft collide. Providence is a conditional
probability of a MAC given that an NMAC has occurred, and has been estimated conservatively as 0.1 for manned aircraft vs. manned/large UAS sized aircraft, and 0.01 for manned aircraft vs. small UAS sized aircraft.

JARUS SORA

Q

Qualification

Process through which a State/approval authority/applicant ensures that a specific implementation satisfies applicable requirements with a level of confidence.

JARUS SORA

Qualified Entity

Accredited legal or natural person which may be charged with certain certification or
oversight tasks under this Regulation by and under the control and the responsibility of the CAA.

UK Regulation (EU) 2018/1139

Quantification

The act of assigning a numerical value to or measuring the probability that a specific event will occur.

JARUS SORA

Qualitative

Examples of qualitative data are engineering judgement or judgement based on operational experience.

Quantitative

Examples of quantitative data are calculation, statistics, or testing.

R

Radio Line of Sight (RLOS)

A direct radio link point-to-point contact between a transmitter and a receiver.

Requirement for the Accreditation of Market Surveillance (RAMS)

Regulation (EC) No 765/2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products.

UK Regulation (EU) 2019/945

Recognised Assessment Entity (RAE)

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

CAP 722B

Recovery Area

An alternative area identified for the purpose of landing the swarm in the event of an emergency.

CAP 722E

Redundancy

The presence of more than one independent means for accomplishing a given function.

Reliability

The probability that an item will perform a required function under specified conditions, without failure, for a specified period of time.

JARUS SORA

Remote Crew Member (RCM)

A member of the crew that performs duties essential to the safety of flight whose duties and responsibilities has been assigned to these by the UAS operator. It may include the remote pilot in command, observers, maintenance staff, launch and recovery system operators etc.) is part of the remote crew.

JARUS SORA

Remote Pilot (RP)

A natural person responsible for safely conducting the flight of an unmanned aircraft by operating its flight controls, either manually or, when the unmanned aircraft flies automatically, by monitoring its course and remaining able to intervene and change the course at any time.

UK Regulation (EU) 2018/1139

Remote Pilot Station (RPS)

See Command Unit (CU).

Remotely Piloted Aircraft (RPA)

An unmanned aircraft which is piloted from a Remote Pilot Station.
Note: Remote Pilot Station is a legacy term and has been replaced by Command Unit.
Note: RPA is a subset of unmanned aircraft.
ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Remotely Piloted Aircraft System (RPAS)

A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.
Note: Remote pilot station is a legacy term and has been replaced by command unit.
Note: RPAS is a subset of Unmanned Aircraft System.
ICAO Doc 10019: Manual on Remotely Piloted Aircraft Systems

Restricted Area

Airspace of defined dimensions over the land areas or territorial waters of a State within which the flight of aircraft is restricted in accordance with certain specified conditions.
ICAO Annex 11

Risk

Is a measure of exposure to a possible hazard and it combines the severity of the consequences at the realisation of the hazard (how bad) and the likelihood of suffering those consequences (how often).

Risk Analysis

The development of qualitative and / or quantitative estimate of risk based on evaluation and mathematical techniques.
JARUS SORA

Risk Assessment

The process by which the results of risk analysis are used to make decisions.
JARUS SORA

Risk Estimation

The combination of the consequences and likelihood of the harm.
JARUS SORA

Risk Management

Process that encompasses: Hazard Identification, Risk Assessment, Hazard Risk Matrix, Risk reduction, and Risk monitoring and review.

Military Aviation Authority (MAA) 02 – Master Glossary

Risk Ratio

The risk ratio is the ratio between a conditional probability with a mitigating system, divided by a conditional probability without a mitigating system. The conditional probability is, given an encounter, an NMAC occurs. An encounter is defined as proximity of 3000 ft horizontally and ± 350 ft vertically. An NMAC is defined as proximity of 500 ft horizontally and ±100 ft vertically.

JARUS SORA

Robustness

Robustness is the term used to describe the combination of two key characteristics of a risk mitigation or operational safety objective:
The level of integrity (LOI) i.e., how good the mitigation/objective is at reducing risk.
The level of assurance (LOA) i.e., the degree of certainty with which the level of integrity is ensured.

UK SORA

Rotorcraft

A heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.

JARUS SORA

Runway Protection Zone (RPZ)

A zone, which comprises part of the UAS Flight Restriction Zone. It is the airspace extending from the surface to a height of 2,000 feet above the level of the aerodrome within the area bounded by a rectangle:

a. whose longer sides measure 5 km,
b. whose shorter sides measure:
   (i) 1 km (except in the case of Heathrow Airport), or;
   (ii) 1.5 km, in the case of Heathrow Airport, and;
c. which is positioned so that:
   (i) one of the shorter sides of the rectangle (“side A”) runs across the runway threshold, and;
   (ii) the two longer sides of the rectangle are parallel to, and equidistant from, the extended runway centre line as it extends from side A out to, and beyond, the runway end to which the runway threshold relates.

ANO 2016: Article 94B

Rural Air Volume

In the context of the air risk, the volume not defined as urban environment and not within the aerodrome traffic zone (ATZ) of an airport.

JARUS SORA

S

Safety

Safety is the state in which the risk of harm to persons or property is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management.

JARUS SORA

Safety Culture (SC)

An Engaged Air Safety Culture is that set of enduring values and attitudes, regarding Air Safety issues, shared by every member, at every level, of an organisation. It refers to the extent to which each individual and each group of the organisation seeks to be aware of the risks induced by its activities; is continually behaving so as to preserve and enhance safety; is willing and able to adapt when facing safety issues; is willing to communicate safety issues; and continually evaluates safety related behaviour.

Military Aviation Authority (MAA) 02 – Master Glossary

Safety Management System (SMS)

A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies, and procedures.

Safety Objective

A measurable goal or desirable outcome related to safety.

Safety Risk

See Risk.

Safety Risk Level

The Initial Safety Risk Level is a combination of the ‘likelihood’ of a Safety Risk occurring and the ‘severity’ of harm to people whilst considering the existing mitigations present. If necessary, further mitigations may be applied which result in a Revised Safety Risk Level.

See and Avoid

The requirement of the pilot of an aircraft to “see” conflicting aircraft and then take appropriate actions to “avoid” a collision, and to remain well clear of other aircraft in accordance with, 14 CFR 91.113, SERA 3201, and ICAO Annex 2 section 3.2.

JARUS SORA

Segregated Airspace

Airspace of specified dimensions allocated for exclusive use to a specific user(s).
Note: This definition is currently under review and subject to change.

ICAO Doc 10088

Sense and Avoid

See Detected and Avoid.

Separation

Maintaining a specific minimum distance between an aircraft and another aircraft or terrain to avoid collisions, normally by requiring aircraft to fly at set levels or level bands, on set routes or in certain directions, or by controlling an aircraft's speed.

JARUS SORA

Serious Incident

An incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.

UK Regulation (EU) 996/2010

Serious Injury

An injury which is sustained by a person in an accident and which involves one of the following:

a. hospitalisation for more than 48 hours, commencing within 7 days from the date the injury was received;

b. a fracture of any bone (except simple fractures of fingers, toes, or nose);

c. lacerations which cause severe haemorrhage, nerve, muscle or tendon damage;

d. injury to any internal organ;

e. second or third degree burns, or any burns affecting more than 5 % of the body surface;

f. verified exposure to infectious substances or harmful radiation.

UK Regulation (EU) 996/2010

Severity

The consequence or impact of a hazard's effect or outcome in terms of degree of loss or harm.

JARUS SORA

Sheltering

Expected protection of people from the UA in case of crash into a building or structure.

JARUS SORA

Smart Battery

A battery with internal electronics that typically assist efficient charging, can be set to automatically discharge the battery into storage state, manage its own temperature and automatically maintain battery charging logs.]

CAP2606

Software

Computer programs, procedures, rules, and any associated documentation pertaining to the operation of a computer system.

JARUS SORA

Sound Power Level L_{WA}

The A-weighted sound power in dB in relation to 1 pW as defined in EN ISO 3744:2010.

UK Regulation (EU) 2019/947

Specific Category

UAS operations in the 'Specific' category shall require an Operational Authorisation issued by the CAA pursuant to Article 12, or an Authorisation received in accordance with Article 16.

UK Regulation (EU) 2019/947: Article 3

Specific Operation Risk Assessment (SORA)

A methodology to guide both the applicant and the competent authority in determining whether a UAS operation can be conducted in a safe manner.

JARUS SORA

Standard

A published document established by consensus and approved by a recognised body that sets out specifications and procedures to ensure that a material, product, method or service meets its purpose and consistently performs to its intended use.

JARUS SORA

Standard Operating Procedure (SOP)

A set of instructions covering those features of operations which lend themselves to a definite or standardised procedure without loss of effectiveness.

JARUS SORA

Standard Scenario

A description of a type of UAS operation, for which a specific operations risk assessment (SORA) has been conducted and on the basis of which mitigations means have been proposed that are deemed acceptable by the competent authority. The use of a standard scenario greatly simplifies and expedites the application process for the applicant and for the regulator.

JARUS SORA

Sterile Ground Area

An area on the ground or water within which only people that are involved in the operation are permitted.

CAP 722E

Strategic Collision Risk Mitigation

Procedures and operational restrictions intended to control the crewed aircraft type, encounter rates or time of exposure, prior to take-off.

UK SORA

Strategic Ground Risk Mitigation

Proposed mitigations that are intended to reduce the intrinsic Ground Risk Class (iGRC) associated with a given operation.

UK SORA

Strategic Conflict Mitigation

For the purposes of the SORA, strategic conflict mitigation consists of procedures aimed at reducing the UAS encounter rates prior to UAS take-off. Strategic mitigation is about controlling or mitigating risk by reducing local aircraft density or time of exposure of an individual UAS. These mitigations tend to take the form of operational restrictions of time or space. Strategic Mitigation does not fulfil the 14 CFR 91.113, SERA 3201, or ICAO Annex 2 section 3.2 to “See and Avoid.” (Examples of strategic mitigation; an operational restriction to fly between the hours of 10PM and 3 AM; operational restriction to stay below 500 feet AGL; operational restriction to stay within 1 mile of a geographic location; etc.). Strategic Mitigation traces to the strategic layer of ICAO’s conflict management concept.

JARUS SORA

Swarm Operations

The operation of more than one uncrewed aircraft (UA) controlled collectively rather than individually.

CAP 722E

System

A combination of inter-related items arranged to perform a specific function(s).

JARUS SORA

System Safety

System safety is a specialty within system engineering that supports program risk management. It is the application of engineering and management principles, criteria, and techniques to optimise safety. The goal of System Safety is to optimise safety by the identification of safety related risks, eliminating or controlling them by design and/or procedures, based on acceptable system safety precedence.

JARUS SORA

Swarming

Operation of more than one UA which are controlled collectively rather than individually.

CAP 722E

T

Tactical Conflict Mitigation

For the purposes of the SORA, tactical conflict mitigation is the act of mitigating collision risk over a very short time horizon (minutes to seconds). Tactical mitigations take the form of SDAF loop's (See, Decide, Action, and Feedback Loop). Tactical Mitigation systems operate using a sensor to "see" the threat, "deciding" how to mitigate the risk, "acting" on the decision, and then having system feedback in order to monitor the risk and implement new corrections if needed. Tactical mitigation may fulfil the 14 CFR 91.113, SERA 3201 and ICAO Annex 2 section 3.2 "See and Avoid" requirement. (Examples of Tactical Mitigation; TCAS, ATC, ACAS, MIDCAS, DAA, ABSAA, GBSAA, See and Avoid, etc.). Tactical mitigation traces to the separation provision and collision avoidance layers of ICAO's conflict management concept.

JARUS SORA

Take-Off Mass

For the purposes of Article 22, it is the mass of the UA at the point of take-off for that particular flight. See maximum take-off mass (MTOM).

Technical Procedures Manual (TPM)

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

Technical Specification

A document that establishes technical requirements to be fulfilled by a product, process, or service.

Testing

The process of operating a system under specified conditions, observing or recording the results, and making an evaluation of some aspect of the system.

JARUS SORA

Tethered Unmanned Aircraft

An unmanned aircraft that remains securely attached (tethered) via a physical link to a person, the ground or an object at all times while it is flying. The tether normally takes the form of a flexible wire or a cable and may also include the power supply to the aircraft as well.

Third Country

Any country or territory other than the United Kingdom.

UK Regulation (EU) 2019/945: Article 41

Third Party

Party deriving no economic benefit and no control over risk associated with the UAS operation.

JARUS SORA

Threat

In the context of the holistic risk model, a threat is defined as an occurrence that in the absence of appropriate threat barriers can potentially result in the hazard.

JARUS SORA

Tolerable

Risk management term; see also ALARP. The threshold levels of risk appetite that can be accepted. The Health and Safety Executive defines Tolerable as a "willingness by society as a whole to live with a risk so as to secure certain benefits and in the confidence that the risk is one that is worth taking and that it is being properly controlled".

Total System Error

All errors impacting the position of the UA. It includes the accuracy of the navigation solution, the flight technical error of the UAS, as well as the path definition error (e.g., map error) and latencies. Errors are usually determined by the interaction of several contributes, such as positioning sensors providing position, navigation and flight control systems, system and human latencies, and environment.

JARUS SORA

Toy

Re-org into a def: To be classed as a toy, a product must be able to comply with the 'Toys (Safety) regulations 2011. Essentially, a 'toy' is a product that is considered to be suitable for use by a person who is under the age of 14 years. Therefore, if the product is not marked as such within its packaging, then it cannot be considered to be a toy.

Transponder Mandatory Zone (TMZ)

Airspace of defined dimensions wherein the carriage and operation of pressure-altitude reporting transponders is mandatory.

U

Uncontrolled Airspace

Airspace with a classification that does not fall under Controlled Airspace. E.g. Class G airspace.

JARUS SORA

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.

UK Regulation (EU) 2019/947

United Kingdom (UK) Marking

Marking in the form published in accordance with Article 30(1) of Requirements for Accreditation and Market Surveillance (RAMS).
Note: See Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) 339/93.

UK Regulation (EU) 2019/945

United Kingdom Pre Defined Risk Assessment (UKPDRA01)

Visual Line of Sight (VLOS) Operations within 150 metres of any Residential, Commercial, Industrial or Recreational Areas for UAS with a Maximum Take-Off Mass of less than 25kg

CAP 722H

Unmanned Aircraft (UA)

Any aircraft operating or designed to operate autonomously or to be piloted remotely without a pilot on board.

UK Regulation (EU) 2018/1139

Unmanned Aircraft Observer

A person, positioned alongside the remote pilot, who, by unaided visual observation of the unmanned aircraft, assists the remote pilot in keeping the unmanned aircraft in VLOS and safely conducting the flight.

UK Regulation (EU) 2019/947

Unmanned Aircraft System (UAS)

An unmanned aircraft and the equipment to control it remotely.
Note: The UAS comprises individual 'system elements' consisting of the unmanned aircraft (UA) and any other system elements necessary to enable flight, such as a command unit (CU), communication link and launch and recovery element. There may be multiple UAs, CUs or launch and recovery elements within a UAS.

UK Regulation (EU) 2019/947

Unmanned Aircraft System (UAS) component design and production organisation

The organisation designing and producing a component to be installed on a UAS (e.g., parachute). It is also responsible for carrying out the test, check compatibility and interface with the UAS models listed in the component instruction manual.

JARUS SORA

Unmanned Aircraft System (UAS) component installer

The organisation responsible for installing a component (e.g., parachute) on a UAS model listed in the component instruction manual, using the procedure defined in the same manual. Depending on the level of integration of the component, the component installer may be the UAS operator or in some cases the UAS production organisation or one designated by them.

JARUS SORA

Unmanned Aircraft Systems Delegated Regulation (UAS DR)

Assimilated Regulation (EU) 2029/945 on unmanned aircraft systems and on third country operators of unmanned aircraft systems, as retained in UK domestic law.

Unmanned Aircraft System (UAS) Geographical Zone

A portion of airspace established by the Secretary of State that facilitates, restricts or excludes UAS operations in order to address risks pertaining to safety, privacy, protection of personal data, security or the environment, arising from UAS operations.

UK Regulation (EU) 2019/947

Unmanned Aircraft System Implementing Regulation (UAS IR)

Assimilated Regulation (EU) 2019/947 on the rules and procedures for the operation of unmanned aircraft, as retained in UK domestic law.

Unmanned Aircraft System (UAS) Operation

It may consist in one or multiple flights, even in different locations and with different purposes, conducted with a UAS with the same features, characterised by the same final air rik, final ground risk, SAIL score, ground and air risk mitigations and containment level.

JARUS SORA

Unmanned Aircraft System (UAS) Operator

Any legal or natural person operating or intending to operate one or more UAS.

UK Regulation (EU) 2019/947

Unmanned Aircraft System (UAS) Traffic Management

A specific aspect of air traffic management which manages UAS operations safely, economically, and efficiently through the provision of facilities and a seamless set of services in collaboration with all parties and involving airborne and ground-based functions. In Europe it is referred as U-space.

JARUS SORA

Unmanned Sailplane

An unmanned aircraft that is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does not depend on an engine. It may be equipped with an engine to be used in case of emergency.

UK Regulation (EU) 2019/947

Urban Air Volume

In the context of the air risk, it is the volume above a town or a city, starting from ground, where there is a higher probability that air operations (with or without pilots on board) may take place for several purposes (e.g., aerial work, delivery, transport, emergency etc.).

JARUS SORA

V

Validated

A term used to describe controls/safety requirements that are unambiguous, correct, complete, and verifiable.

JARUS SORA

Variation

Change of an operation or technical data that requires an application to the CAA.

Verified

A term used to describe controls/safety requirements that are objectively determined to have been met by the design solution.

JARUS SORA

Visual Line of Sight (VLOS) Operation

A type of UAS operation in which, the remote pilot is able to maintain continuous unaided visual contact with the unmanned aircraft, allowing the remote pilot to control the flight path of the unmanned aircraft in relation to other aircraft, people and obstacles for the purpose of avoiding collisions.

UK Regulation (EU) 2019/947

Visual Observer (VO)

See airspace observer and/or unmanned aircraft observer as appropriate.