

Supplementary Instruction (SI)

CAP 493 MATS Part 1

Safety and Airspace Regulation Group
Intelligence, Strategy and Policy



Number: 2017/02

Issued: 21 April 2017

Version: 5

Effective Date: See Paragraphs 3.1 & 3.2

Standardised European Rules of the Air (SERA) Part C Phase 1 Implementation

1. Introduction

- 1.1 Implementing Regulation (EU) No. 923/2012 (Standardised European Rules of the Air (SERA) Parts A & B) was incorporated into CAP 493 'Manual of Air Traffic Services (MATS) Part 1' through Supplementary Instruction (SI) 2014/06. The purpose of this SI is to introduce Implementing Regulation (EU) No. 2016/1185 (SERA Part C) Phase 1, which amends Implementing Regulation (EU) No. 923/2012 through the addition of several new requirements and revisions to a number of aspects of SERA Part A & B.

2. Background

- 2.1 SERA Part C transposes aspects of PANS-ATM (ICAO DOC 4444) into European Law in two phases. Phase 1, which is the subject of this SI, addresses those elements that took effect in EU law on 18 August 2016. EASA Acceptable Means of Compliance supporting these provisions were published on 14 October 2016. See <https://www.easa.europa.eu/regulations>
- 2.2 SERA Part C Phase 1 impacts on the MATS Part 1 are as follows:
- (a) the introduction of a number of new definitions;
 - (b) changes in SERA references;
 - (c) the insertion of additional SERA references; and
 - (d) the amendment of VFR and SVFR clearance procedures.
- 2.3 Several references to The Air Navigation Order 2009 have been amended to reflect the entry into law of The Air Navigation Order 2016. In addition, a number of new Official Record Series 4 (ORS4s) have been published and crossed reference within the MATS Part 1 text.
- 2.4 Phase 2 will be the subject of a subsequent SI to take effect by no later than 12 October 2017.

3. Revised MATS Part 1 Procedures

- 3.1 With effect of 24 April 2017, the Manual of Air Traffic Services (CAP493) is amended as shown at Appendix A, and Supplementary Instruction SI 2015/03 entitled 'SERA Exemption, Permission and Authorisation Updates' is withdrawn.
- 3.2 With effect of 5 May 2017, the Manual of Air Traffic Services (CAP493) is amended as shown at Appendix B.

- 3.3 Please note: Section 1, Chapter 2, paragraph 8B.2; Section 2, Chapter 1, paragraph 6A.2; and Section 3, Chapter 1, paragraph 8.6, features in both Appendices A and B. Police, HEMS and SAR operations are facilitated in Appendix A from 24 April 2017 and additionally, SAR training flights are facilitated in Appendix B from 5 May 2017.
- 3.4 This change will be incorporated into CAP 493, Edition 6 at Amendment 2 in due course.

4. Queries

- 4.1 Any queries or further guidance required on the content of this SI should be addressed to:

ATS Enquiries
Intelligence, Strategy and Policy
CAA Safety and Airspace Regulation Group
2W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR
E-mail: ats.enquiries@caa.co.uk

- 4.2 Any queries relating to the availability of this SI should be addressed to:

ATS Documents
Intelligence, Strategy and Policy
CAA Safety and Airspace Regulation Group
2W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR
E-mail: ats.documents@caa.co.uk

5. Cancellation

- 5.1 This SI shall remain in force until incorporated into CAP 493 or is cancelled, suspended or amended.

6. Revision history

- 6.1 Changes from Version 4 of this SI include the following:
- (a) The issue of ORS4 1222, which supersedes ORS4 1215 and extends the scope of the exemption to also include helicopter operations conducting national infrastructure activities, such as Powerline and Pipeline inspections;
 - (b) The addition of a new paragraph at Section 1, Chapter 2, Paragraph 8B.4 and an associated note;
 - (c) The addition of a new paragraph at Section 2, Chapter 1, Paragraph 6A.4 and an associated note; and
 - (d) The addition of a note at Section 3, Chapter 1, Paragraph 8.8.

Appendix A – Effective date: 24 April 2017

Section 1: Chapter 2: Flight Rules

8. Special VFR Flight

8B. Weather

8B.1 When the reported meteorological conditions at aerodromes in Class D airspace reduce below a ground visibility of 1500 m and / or a cloud ceiling of 600 ft, both by day or night, ATC shall advise pilots of aircraft intending to operate under Special VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.

8B.2 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, controllers shall not issue a SVFR clearance to aircraft wishing to operate under SVFR to or from an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit, when the official meteorological report at that aerodrome indicates:

(1) By day or night:

(a) Aircraft other than helicopters: ground visibility less than 1500 m and/or cloud ceiling less than 600 ft (SERA.5010(c));

(b) Helicopters: ground visibility less than 800 m and/or cloud ceiling less than 600 ft (SERA.5010(c)).

Note 1: When the reported ground visibility at the aerodrome is less than 1500 m, ATC may issue a Special VFR clearance for a flight crossing the control zone and not intending to take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the flight visibility reported by the pilot is not less than 1500 m, or for helicopters, not less than 800 m. (GM1 SERA.5010(c))

Note 2: UK General Permission ORS4 no. 1125 permits SVFR flight within a control zone at night.

Note 3: UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).

8B.3 When the reported ground visibility consists of two values, the lower of the two values shall be used when determining if a Special VFR clearance can be issued.

8B.4 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

- (a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and
- (b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

8B.5 Aircraft flying along promulgated routes may encounter deteriorating weather conditions. Controllers should be prepared to provide an alternative route to enable the pilot to comply with the conditions of a Special VFR clearance.

Section 2: Chapter 1: Aerodrome Control

6A. Class D

- 6A.1 When the reported meteorological conditions at aerodromes in Class D airspace reduce below a ground visibility of 5 km and / or a cloud ceiling of 1500 ft, both by day or night, ATC shall advise pilots of aircraft intending to operate under VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.
- 6A.2 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, ATC shall not issue any further VFR clearances to aircraft wishing to operate in accordance with VFR to or from an aerodrome, or enter the aerodrome traffic zone, or aerodrome traffic circuit, of an aerodrome within Class D airspace when the official meteorological report at that aerodrome indicates, by day or night, a ground visibility less than 5 km and / or a cloud ceiling less than 1500 ft (SERA.5005(b)(1)&(2)).

Note 1: UK General Permission ORS4 no. 1125 permits VFR flight within a control zone at night.

Note 2: UK General Exemption ORS4 No. 1195 enables the pilot in command of an aircraft to transit Class D airspace in accordance with VFR by day, remaining clear of cloud with surface in sight and an indicated airspeed of 140 kt or less, with a flight visibility of 5 km or for helicopters, a flight visibility of 1500 m. Except for commanders of a Powerline, Pipeline, Police, Helimed, or SAR helicopters, which operate in

accordance with their respective ORS4, this exemption does not enable the pilot in command of an aircraft to transit an aerodrome traffic zone or aerodrome traffic circuit within a control zone, when the official meteorological report at that aerodrome indicates the values specified in paragraph 6A.2.

Note 3: UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).

6A.3 When the reported ground visibility consists of two values, the lower of the two values shall be used when determining whether to implement the above procedures.

6A.4 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

(a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and

(b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

Section 3: Chapter 1: Approach Control

8. VFR Flights

8.1 Approach Control shall retain all arriving VFR flights under its control until appropriate traffic information on IFR flights and other VFR flights has been issued and co-ordination effected with Aerodrome Control.

8.2 A particular watch should be kept for situations where a VFR flight may approach the aerodrome in a sector in which other aircraft are letting down on an instrument approach aid, or where sequencing is in operation. D/F indications, where available, will assist in this respect. In these circumstances the pilot of the VFR flight should not be given clearance for a straight-in approach and should be advised to avoid the initial and final approach areas.

- 8.3 Approach Control must ensure that VFR flights are transferred in sufficient time for Aerodrome Control to pass additional information in respect of local traffic.
- 8.4 Visual Reference Points (VRPs) are established to assist ATC in routing VFR traffic and to integrate VFR flights with IFR flights. Where VRPs are established outside controlled airspace, controllers should not instruct aircraft to hold over such VRPs. This does not apply to VRPs established within controlled airspace where a known traffic environment exists. Controllers should not direct VFR traffic over VRPs unless the IFR traffic situation specifically demands this.
- 8.5 When the reported meteorological conditions at aerodromes in Class D airspace reduce below a ground visibility 5 km and / or a cloud ceiling 1500 ft, both by day or night, ATC shall advise pilots of aircraft intending to operate under VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.
- 8.6 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, controllers shall not issue any further VFR clearances to aircraft wishing to operate in accordance with VFR to or from an aerodrome, or enter the aerodrome traffic zone, or aerodrome traffic circuit, of an aerodrome within Class D airspace when the official meteorological report at that aerodrome indicates, by day or night, a ground visibility less than 5 km and / or a cloud ceiling less than 1500 ft (SERA.5005(b)(1)&(2)).
- Note 1:** UK General Permission ORS4 no. 1125 permits VFR flight within a control zone at night.
- Note 2:** UK General Exemption ORS4 No. 1195 enables the pilot in command of an aircraft to transit Class D airspace in accordance with VFR by day, remaining clear of cloud with surface in sight and an indicated airspeed of 140 kt or less, with a flight visibility of 5 km or for helicopters, a flight visibility of 1500 m. Except for commanders of a Powerline, Pipeline, Police, Helimed, or SAR helicopters, which operate in accordance with their respective ORS4, this exemption does not enable the pilot in command of an aircraft to transit an aerodrome traffic zone or aerodrome traffic circuit within a control zone, when the official meteorological report at that aerodrome indicates the values specified in paragraph 8.6.
- Note 3:** UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).
- 8.7 When the ground visibility consists of two values, the lower of the two values shall be used when determining whether to implement the above procedures.
- 8.8 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following individuals to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

- (a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and
- (b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

Appendix B – Effective date: 5 May 2017

Abbreviations

ATSP Air Traffic Service Provider

SERA Standardised European Rules of the Air

Definitions

Air Traffic Services (ATS) surveillance service A service provided directly by means of an ATS surveillance system. (SERA Article 2(34a))

Estimated Time of Arrival For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For Visual Flight Rules (VFR) flights, the time at which it is estimated that the aircraft will arrive over the aerodrome. (SERA Article 2(71))

Instrument Approach Operation an approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- (a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and
- (b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance. (SERA. Article 2(89a))

Note: Lateral and vertical guidance utilised in an instrument approach procedure refers to the guidance provided either by:

- (a) a ground-based navigation aid; or
- (b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these. (SERA GM1 Article 2(89a))

Minimum fuel The term used to describe a situation in which an aircraft's fuel supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted. (SERA Article 2(94a))

Safety-sensitive personnel persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers. (SERA Article 2(116))

Standardised European Rules of the Air Commission Implementing Regulation (EU) No. 923/2012 of 26 September 2012 laying down the common rules of the air and operational

provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No. 1035/2011 and Regulations (EC) No. 1265/2007, (EC) No. 1794/2006, (EC) No. 730/2006, (EC) No. 1033/2006 and (EU) No. 255/2010 (as amended).

Section 1: Chapter 1

5. Air Traffic Control Service

- 5.1 An ATC service is provided according to the particular circumstances and class of airspace.
- 5.2 An Air Traffic Control Service shall include the provision of pertinent flight information.
- 5.3 Air traffic control service shall be provided (SERA.8001):
- (1) to all IFR flights in airspace Classes A, B, C, D and E;
 - (2) to all VFR flights in airspace Classes B, C and D;
 - (3) to all special VFR flights;
 - (4) to all aerodrome traffic at controlled aerodromes

Section 1: Chapter 2: Flight Rules

2. Classification of Airspace

- 2.1 The classification of the airspace within an FIR determines the flight rules which apply and the minimum services that are to be provided (SERA.6001). These are summarised below.

Table 1: Classification of Airspace

Class	Flight Rules	Aircraft Requirements	Minimum Services by ATC Unit
A	IFR only	ATC clearance before entry. Comply with ATC instructions	Separate all aircraft from each other.
B	IFR and VFR	ATC clearance before entry. Comply with ATC instructions.	Separate all aircraft from each other.
C	IFR and VFR	ATC clearance before entry. Comply with ATC instructions.	(a) Separation IFR flights from other IFR and VFR flights; (b) Separate VFR flights from IFR

			<p>flights;</p> <p>(c) Pass traffic information to VFR flights on other VFR flights and give traffic avoidance advice when requested.</p>
D	IFR and VFR	ATC clearance before entry. Comply with ATC instructions.	<p>(a) Separate IFR flights from other IFR flights;</p> <p>(b) Pass traffic information to IFR flights and SVFR flights on VFR flights and give traffic avoidance advice when requested;</p> <p>(c) Pass traffic information to VFR flights on all other flights and provide traffic avoidance advice when requested.</p>
E	IFR and VFR	<p>IFR flights to obtain ATC clearance before entry and comply with ATC instructions.</p> <p>VFR flights do not require clearance.</p>	<p>(a) Separate IFR flights from other IFR flights;</p> <p>(b) Pass traffic information, as far as practicable, to IFR flights on participating and non-participating VFR flights;</p> <p>(c) Pass traffic information, as far as practicable, to participating VFR flights in accordance with the type of UK FIS provided.</p>
F	IFR and VFR	Participating IFR flights are expected to comply with ATC instructions.	Separation provided, as far as practicable, between participating IFR flights.
G	IFR and VFR	None.	None.

Note 1: Class B airspace is considered less restrictive than Class A airspace; Class C airspace less restrictive than Class B airspace, etc. (GM1 SERA.6001(a))

Note 2: Airspace Classes A, B, C, D and E are controlled airspace.

Note 3: Class E airways are notified as Transponder Mandatory Zones (TMZ).

Note 4: When providing traffic avoiding advice, controllers shall remind pilots of their responsibility to remain clear of cloud with the surface in sight.

Note 5: When the controller considers that more immediate action is required by the pilot, traffic avoidance advice may be passed by ATC before traffic information.

3. Speed Limit

3.1 Airspace speed limits and procedure speed limits are two types of speed restrictions, which may apply to certain flights.

3A. Airspace Speed Limit (SERA.6001)

3A.1 Aircraft flying below FL100 are required to observe, with exceptions, a speed limit of 250 kt IAS. Such a limit is an essential component of the 'see and avoid' principle when separation is not established by ATC. This is in addition to speed limits, which may be notified for specific procedures.

3A.2 The 250 kt speed limit does not apply to:

- (1) flights in Class A and B airspace;
- (2) IFR flights in Class C airspace;
- (3) for exempted VFR flights in Class C airspace when authorised by an ATC unit in accordance with MATS Part 2;
- (4) for exempted flights in Class D airspace when authorised by an ATC unit in accordance with MATS Part 2;
- (5) test flights in accordance with specified conditions;
- (6) aircraft taking part in flying displays when authorised by the CAA;
- (7) aircraft subject to a written permission granted by the CAA;
- (8) State aircraft such as military aircraft.

Note: Aircraft type and Aircraft Operator combinations exempt from the Class D airspace speed restriction on departure are published in the UK AIP according to the aerodrome to which they apply.

3A.3 Controllers may only exercise the authority granted in paragraph 3A.2 (3) above when they are satisfied that they are in contact with all aircraft in the relevant part of the airspace. VFR flights in the vicinity are to be warned about aircraft flying at a higher speed.

3A.4 An airspace speed limit must not be relaxed by ATC for flights which will be transiting from a known traffic environment, e.g. Class A airspace, into airspace where the 'see and avoid' principle operates as the primary means of separation.

3A.5 In Class E, F and G airspace, conflicting traffic may not be known to ATC and so it is necessary for all flights to make use of the ‘see and avoid’ principle. In order for this to operate effectively, controllers shall not authorise a relaxation of the airspace speed limit.

Note: The speed limitation of 250 kt for VFR flights in airspace Classes C, D, E, F, G and for IFR flights in airspace Classes D, E, F, G is intended to facilitate visual acquisition of flights which are not separated. (GM1 SERA.6001(b))

4. Visual Flight Rules

4.1 The pilot of an aircraft is responsible for determining whether or not the meteorological conditions permit flight in accordance with the Visual Flight Rules. The criteria for determining Visual Meteorological Conditions are summarised in the table below.

Table 2:

By Day	Distance from Cloud		Flight Visibility
	Horizontal	Vertical	
At and Above FL 100 <u>(SERA.5001)</u> Class B, C, D, E, F and G Airspace	1500 m	1000 ft	8 km
Below FL100 and above 3000 ft amsl or below FL100 and above 1000 ft above terrain, whichever is the higher. <u>(SERA.5001)</u> Class B, C, D, E, F and G airspace	1500 m	1000 ft	5 km
At and below 3000 ft amsl or 1000 ft above terrain, whichever is the higher. <u>(SERA.5001)</u> Class B, C, D and E airspace Class F and G airspace	1500 m	1000 ft	5 km
	Clear of cloud and with the surface in sight		5 km
Alternatively, at or below 3000 ft amsl. <i>For aircraft other than helicopters flying at 140 kt IAS or less</i> Transiting Class D	Clear of cloud and with the surface in sight.		5 km

airspace and remaining outside the aerodrome traffic zone, or aerodrome traffic circuit (ORS4 no.1195) Class G airspace (ORS4 no.1067) <i>For helicopters flying at 140 kt IAS or less</i>	Clear of cloud and with the surface in sight.	1500 m
Transiting Class D airspace and remaining outside the aerodrome traffic zone, or aerodrome traffic circuit (ORS4 no.1195)	Clear of cloud and with the surface in sight.	1500 m
Class G airspace (ORS4 no.1067)	Clear of cloud and with the surface in sight.	1500 m

Table 3:

By Night	Distance from Cloud		Flight Visibility
	Horizontal	Vertical	
At and Above FL100 (SERA.5001) Class B, C, D, E, F and G airspace	1500 m	1000 ft	8 km
Below FL100 and above 3000 ft or above 1000 ft above terrain. (SERA.5001) Class B, C, D, E, F and G airspace	1500 m	1000 ft	5 km
At and below 3000 ft amsl or at or below 1000 ft above terrain, whichever the higher. (SERA.5001 and SERA.5005(3)) Class B, C, D, E, F and G airspace	1500 m and with surface in sight.	1000 ft	5 km

Note 1: VMC minima for Class A airspace is:

At or above FL 100 8 km flight visibility, 1500 m horizontal and 1000 ft vertical away from cloud.

Below FL100 5 km flight visibility, 1500 m horizontal and 1000 ft vertical away from cloud

VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.

8B.2 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, or a SAR training flight operating in accordance with MATS Part 2, controllers shall not issue a SVFR clearance to aircraft wishing to operate under SVFR to or from an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit, when the official meteorological report at that aerodrome indicates:

(1) By day or night:

(a) Aircraft other than helicopters: ground visibility less than 1500 m and/or cloud ceiling less than 600 ft (SERA.5010(c));

(b) Helicopters: ground visibility less than 800 m and/or cloud ceiling less than 600 ft (SERA.5010(c)).

Note 1: When the reported ground visibility at the aerodrome is less than 1500 m, ATC may issue a Special VFR clearance for a flight crossing the control zone and not intending to take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the flight visibility reported by the pilot is not less than 1500 m, or for helicopters, not less than 800 m. (GM1 SERA.5010(c))

Note 2: UK General Permission ORS4 no. 1125 permits SVFR flight within a control zone at night.

Note 3: UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).

8B.3 When the reported ground visibility consists of two values, the lower of the two values shall be used when determining if a Special VFR clearance can be issued.

8B.4 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following individuals to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

(a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and

- (b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

8B.5 Aircraft flying along promulgated routes may encounter deteriorating weather conditions. Controllers should be prepared to provide an alternative route to enable the pilot to comply with the conditions of a Special VFR clearance.

8E. Pilot's Responsibilities

8E.1 The pilot of an aircraft flown in accordance with a Special VFR clearance:

- (1) must comply with ATC instructions;
- (2) is responsible for ensuring that his flight conditions enable him to remain clear of cloud, determine his flight path with reference to the surface and keep clear of obstructions;
- (3) is responsible for ensuring that he flies at an indicated airspeed of 140 kt or less in order to provide adequate opportunity to observe any obstacles in time to avoid a collision (SERA.5010(b)(3));
- (4) is responsible for ensuring that he flies within the limitations of his licence;
- (5) is responsible for complying with the relevant RoA low flying restrictions (other than the 1000 ft rule);
- (6) is responsible for avoiding Aerodrome Traffic Zones unless prior permission for penetration has been obtained from the relevant ATC unit.

Section 1: Chapter 4: Control of Traffic

11A. Estimate Messages

11A.1 The estimate message shall contain the following information about an intended flight:

- (1) Direction of flight (eastbound or westbound);
- (2) Aircraft identification and type;
- (3) Squawk;
- (4) Transfer point and ETA;
- (5) Level;
- (6) True airspeed;
- (7) Route;
- (8) Destination and/or clearance limit.

- 11A.2 Revisions to the message must be passed if:
- (1) there are any subsequent changes in Flight Level, Squawk or route; or
 - (2) the estimated time varies by in excess of 2 minutes (SERA.8020(b)(3)).
- 11A.3 The phraseology to be used when telephoning estimate messages is shown in Appendix E.

Section 1: Chapter 10: Airborne Collision Avoidance System

5. Departure from ATC Clearance

- 5.1 The pilot in command of an aircraft is permitted to depart from an ATC clearance for the purposes of avoiding immediate danger (ANO 2016 Article 249(3)(a), SERA.2010(a), SERA.3201 and SERA.11014). The pilot in command is required to notify ATC as soon as possible (SERA.11014(4)) and submit a written report within 10 days (ANO 2016 Article 249(5)). The completion of an Operator's Air Safety Report satisfies the last requirement.
- 5.2 When a pilot reports a TCAS RA, controllers shall not attempt to modify the aircraft's flight path or reiterate previously issued instructions, until the pilot reports "Clear of Conflict". (SERA.11014(c))
- 5.3 Once an aircraft departs from an ATC clearance in compliance with an RA, or a pilot reports an RA, the controller ceases to be responsible for providing separation between that aircraft and any other aircraft affected as a direct consequence of the manoeuvre induced by the RA. The controller shall resume responsibility for providing separation for all the aircraft affected when:
- (1) The controller acknowledges a report from the flight crew that the aircraft has resumed the current clearance; or
 - (2) The controller acknowledges a report from the flight crew that the aircraft is resuming the current clearance and issues an alternative clearance which is acknowledged by the flight crew. (SERA.11014(d))
- 5.4 The passing of traffic information by controllers to aircraft conducting, or affected by a TCAS RA, is not prescribed, but such information has, if provided inappropriately, the potential to be misheard or to distract flight crews during a period of very high workload. Consequently, controllers should not routinely pass traffic information to aircraft conducting RA manoeuvres, or other aircraft affected by such manoeuvres. Nevertheless, there may be circumstances where the passing of traffic information is justified; consequently, controllers may provide traffic information under the following circumstances:
- (1) To aircraft conducting an RA manoeuvre if it is considered essential for flight safety (e.g. information on aircraft which are known to be in close proximity that are not transponding Mode C information).

- (2) To other aircraft affected by an RA manoeuvre if judged necessary by the controller (e.g. in airspace where the carriage and operation of TCAS and/or SSR transponders is not mandatory).

Section 2: Chapter 1: Aerodrome Control

6. Effect of Weather on Operations

- 6.1 When the reported visibility consists of two values, the lower of the two values shall be used when determining whether or not to implement the procedures below.

6A. Class D

- 6A.1 When the reported meteorological conditions at aerodromes in Class D airspace reduce below a ground visibility of 5 km and / or a cloud ceiling of 1500 ft, both by day or night, ATC shall advise pilots of aircraft intending to operate under VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.

- 6A.2 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, or a SAR training flight operating in accordance with MATS Part 2, controllers shall not issue any further VFR clearances to aircraft wishing to operate in accordance with VFR to or from an aerodrome, or enter the aerodrome traffic zone, or aerodrome traffic circuit, of an aerodrome within Class D airspace when the official meteorological report at that aerodrome indicates, by day or night, a ground visibility less than 5 km and / or a cloud ceiling less than 1500 ft (SERA.5005(b)(1)&(2)).

Note 1: UK General Permission ORS4 no. 1125 permits VFR flight within a control zone at night.

Note 2: UK General Exemption ORS4 No. 1195 enables the pilot in command of an aircraft to transit Class D airspace in accordance with VFR by day, remaining clear of cloud with surface in sight and an indicated airspeed of 140 kt or less, with a flight visibility of 5 km or for helicopters, a flight visibility of 1500 m. Except for commanders of a Powerline, Pipeline, Police, Helimed, or SAR helicopters, which operate in accordance with their respective ORS4, this exemption does not enable the pilot in command of an aircraft to transit an aerodrome traffic zone or aerodrome traffic circuit within a control zone, when the official meteorological report at that aerodrome indicates the values specified in paragraph 6A.2.

Note 3: UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).

6A.3 When the reported ground visibility consists of two values, the lower of the two values shall be used when determining whether to implement the above procedures.

6A.4 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following individuals to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

- (a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and
- (b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

Section 3: Chapter 1: Approach Control

8. VFR Flights

- 8.1 Approach Control shall retain all arriving VFR flights under its control until appropriate traffic information on IFR flights and other VFR flights has been issued and co-ordination effected with Aerodrome Control.
- 8.2 A particular watch should be kept for situations where a VFR flight may approach the aerodrome in a sector in which other aircraft are letting down on an instrument approach aid, or where sequencing is in operation. D/F indications, where available, will assist in this respect. In these circumstances the pilot of the VFR flight should not be given clearance for a straight-in approach and should be advised to avoid the initial and final approach areas.
- 8.3 Approach Control must ensure that VFR flights are transferred in sufficient time for Aerodrome Control to pass additional information in respect of local traffic.
- 8.4 Visual Reference Points (VRPs) are established to assist ATC in routing VFR traffic and to integrate VFR flights with IFR flights. Where VRPs are established outside controlled airspace, controllers should not instruct aircraft to hold over such VRPs. This does not apply to VRPs established within controlled airspace where a known traffic environment exists. Controllers should not direct VFR traffic over VRPs unless the IFR traffic situation specifically demands this.

8.5 When the reported meteorological conditions at aerodromes in Class D airspace reduce below a ground visibility 5 km and / or a cloud ceiling 1500 ft, both by day or night, ATC shall advise pilots of aircraft intending to operate under VFR to or from such aerodromes, and request the pilot to specify the type of clearance required.

8.6 Except for helicopters using Police; Helimed; Rescue; Electricity; Grid; Powerline, or Pipeline callsigns, or a SAR training flight operating in accordance with MATS Part 2, controllers shall not issue any further VFR clearances to aircraft wishing to operate in accordance with VFR to or from an aerodrome, or enter the aerodrome traffic zone, or aerodrome traffic circuit, of an aerodrome within Class D airspace when the official meteorological report at that aerodrome indicates, by day or night, a ground visibility less than 5 km and / or a cloud ceiling less than 1500 ft (SERA.5005(b)(1)&(2)).

Note 1: UK General Permission ORS4 no. 1125 permits VFR flight within a control zone at night.

Note 2: UK General Exemption ORS4 No. 1195 enables the pilot in command of an aircraft to transit Class D airspace in accordance with VFR by day, remaining clear of cloud with surface in sight and an indicated airspeed of 140 kt or less, with a flight visibility of 5 km or for helicopters, a flight visibility of 1500 m. Except for commanders of a Powerline; Pipeline, Police, Helimed, or SAR helicopters, which operate in accordance with their respective ORS4, this exemption does not enable the pilot in command of an aircraft to transit an aerodrome traffic zone or aerodrome traffic circuit within a control zone, when the official meteorological report at that aerodrome indicates the values specified in paragraph 8.6.

Note 3: UK General Exemption ORS4 no. 1222 exempts operations of helicopters conducting Powerline; Pipeline; Police; Helimed; Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the Air Traffic Service Provider, from complying with SERA.5005(b) and SERA.5010(a) and (b).

8.7 When the ground visibility consists of two values, the lower of the two values shall be used when determining whether to implement the above procedures.

8.8 Procedures for operations into subsidiary aerodromes will be found in MATS Part 2.

Note 1: For the purpose of observing the meteorological conditions at an uncontrolled and/or unlicensed aerodrome or operating site located within a control zone, and assessing whether those conditions satisfy the minima specified in SERA.5005(b) and SERA.5010(c) as appropriate, the Civil Aviation Authority deems the following individuals to be competent to act as 'accredited observers' as required within Regulation (EU) 923/2012 Article 2(82) for their flight:

(a) The holders of valid EASA Flight Crew Licences, valid National Flight Crew Licences and Certificates issued by, or on behalf of, the United Kingdom Civil Aviation Authority, and third country licences deemed valid in accordance with Article 150 of the Air Navigation Order 2016; and

- (b) A student pilot-in-command (SPIC) who has passed the theoretical knowledge examination in meteorology toward the grant of a EASA Flight Crew Licence or National Flight Crew Licence or Certificate issued by, or on behalf of, the United Kingdom Civil Aviation Authority within the preceding two years.

Section 5: Chapter 2: Strayed and Unidentified Aircraft

2. Strayed Aircraft

- 2.1 When a controller becomes aware of an aircraft which has deviated significantly from its intended track but has not reported as being lost, the following actions should be followed in so far as is necessary:
- (1) Attempt to establish two-way communication, unless such communication already exists, and inform the pilot of his position (SERA.11010(a)(1)(i) & (ii));
 - (2) Inform other ATS units into whose area the aircraft has strayed or may stray (SERA.11010(a)(1)(iii));
 - (3) Request appropriate assistance from D&D, other ATS units, and other aircraft in establishing communication with the strayed aircraft (SERA.11010(a)(1)(iv) & (v));
 - (4) Notify the Civil Watch Supervisor at the parent ACC in the event that unlawful interference is suspected (SERA.11005 & (SERA.11010(c)).
- 2.2 In the event that a pilot reports that he is lost, controllers should endeavour to provide every possible assistance to the pilot and use all available means to determine the aircraft's position. Controllers should follow, in so far as is necessary, the actions outlined below (SERA.11010(a)(1)(ii)):
- (1) Treat an estimated position given by the pilot with caution;
 - (2) Use ATS surveillance systems and VDF in an attempt to locate the aircraft;
 - (3) If communications are poor, or the controller suspects that the aircraft is below surveillance coverage, the pilot may be advised to climb. However, controllers should be aware that such a climb may present a pilot with flight conditions beyond their capabilities, and the pilot may prefer to remain with the surface in sight;
 - (4) Consider terrain clearance if the aircraft is flying at a low level. Controllers should make allowance for terrain and obstructions within a wide area around the estimated position of the aircraft and advise the pilot to climb if there is any doubt that adequate clearance exists. If a pilot is unable or unwilling to climb he is to be warned of potential terrain hazards in the area;
 - (5) Request assistance from other ATS units in determining the aircraft's position.

- (6) VDF bearings from other units may assist in fixing the position. If it is not possible to establish the position of the aircraft immediately, bearings should be passed to the pilot;
- (7) Inform D&D, which is equipped to provide dedicated assistance;
- (8) Notify the Civil Watch Supervisor at the parent ACC in the event that unlawful interference is suspected.

2.3 When the position of a lost aircraft has been established the controller shall:

- (1) advise the aircraft of its position and the corrective action to be taken. This advice shall be immediately provided when the ATS unit is aware that there is a possibility of interception or other hazard to the safety of the aircraft (SERA.11010 (a)(3)(i)); and
- (2) provide, as necessary, other air traffic service units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft (SERA.11010 (a)(3)(ii)).

3. Unidentified Aircraft

3.1 When a controller becomes aware of an unidentified aircraft within airspace for which they are the controlling authority and an ATC clearance is required, or when required by appropriate military authorities, he should follow, in so far as is necessary, the following actions:

- (1) Attempt to establish the identity of the aircraft;
- (2) Attempt to establish two-way communication (SERA.11010(b)(1));
- (3) Inform D&D and any other affected ATS units or neighbouring FIRs, and request their assistance in establishing the identity of and two-way communication with the aircraft (SERA.11010(b)(2), (3) & (5));
- (4) Notify, the Civil Watch Supervisor at the parent ACC in the event that unlawful interference is suspected (SERA.11005 & (SERA.11010(c)));
- (5) If possible, attempt to obtain information from other aircraft in the area (SERA.11010(b)(4));
- (6) As required, notify those units consulted in the tracing of the unidentified aircraft that the aircraft's identity has been ascertained;
- (7) Complete a Mandatory Occurrence Report.