

UK Flight Information Services

CAP 774



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Revision history

Edition 1**12 June 2008**

The first edition of CAP 774 was published to promulgate the revised UK Flight Information Services effective on 12 March 2009.

Revisions included in Amendment 1 to Edition 1**19 November 2009**

Amendment 1 incorporated changes formulated as a result of a formal six-month review. In addition to editorial changes and minor corrections, Amendment 1 comprised:

Section	Subject
Traffic Service	Amplification regarding pilot controller agreement regarding changes to route and manoeuvring area.
	Additional guidance regarding pilot requests for 'block' altitudes.
Deconfliction Service	Incorporated ATSIN 148 regarding the applicability of deconfliction minima.

Edition 2**14 November 2013**

In addition to editorial, formatting and minor corrections, Edition 2 comprised:

Section	Subject
General	<p>The term 'service' was replaced with 'ATS' where appropriate.</p> <p>The RT phraseology Annex was deleted as all now contained in CAP 413.</p>
ATS Principles	<p>Guidance added regarding the ability for surveillance systems to detect aircraft.</p> <p>Appropriate Type of ATS text revised to align with CAP493 requirements on aircraft leaving controlled airspace.</p> <p>Added guidance text on reduced traffic information and deconfliction advice for SSR Alone service.</p>
Basic Service	<p>Guidance on when Basic Service may not be appropriate.</p> <p>Inclusion of generic traffic information RT phraseology examples.</p>
Traffic Service	<p>Additional guidance on:</p> <ul style="list-style-type: none"> When Traffic Service may not be appropriate. To controllers on whether traffic information is relevant or not. Pilot responsibility for collision avoidance when being provided with headings by ATC.
Deconfliction Service	<p>Additional guidance on the provision of a Deconfliction Service in high traffic density.</p>
Procedural Service	<p>Additional guidance on:</p> <ul style="list-style-type: none"> Traffic information accuracy. Potential to encounter conflicting traffic unknown to ATC and need for pilots to comply with Rules of the Air.

Revisions included in Amendment 1 to Edition 2**24 July 2014**

Section	Subject
Abbreviations	Added QDM and QTE
ATS principles	Added text on Duty of Care. Amended text relating to ATS availability to support inhibiting Deconfliction Service to VFR aircraft.
Basic Service	Significant change made regarding guidance on the provision of traffic information.
Traffic Service	Guidance on pilot responsibility for collision avoidance when being provided with levels by ATC. Amended text to highlight that deconfliction is not provided under a Traffic Service.
Deconfliction Service	Deconfliction Service inhibited to aircraft operating VFR.
Procedural Service	Procedural Service inhibited to aircraft operating VFR. Additional text to highlight that controllers may also provide routes to achieve deconfliction minima.

Revisions included in Amendment 2 to Edition 2**13 November 2014**

Section	Subject
Foreword	Various amendments to meet Reg (EU) 923/2012 (Standardised European Rules of the Air) and to implement the replacement of Class F airspace within the UK by Class E airspace.
Glossary	
ATS principles	
Basic Service	
Traffic Service	
Deconfliction Service	
Procedural Service	

Revisions included in Amendment 3 to Edition 2**4 February 2015**

Section	Subject
Basic Service	Amendment to provision of collision warnings to meet provisions of Reg (EU) 923/2012(SERA.9005(b)(2))

Revisions included in Amendment 4 to Edition 2**18 August 2016**

In addition to editorial, formatting and minor corrections, Amendment 4 comprises:

Section	Subject
Glossary	Amendment to meet provisions of Reg (EU) 923/2012 (Standardised European Rules of the Air)

Revisions included in Edition 3**27 April 2017**

In addition to editorial, formatting and minor corrections, Edition 3 comprises:

Section	Subject
Glossary	Removal of content following publication of CAP 1430 the UK Air Traffic Management Vocabulary.

Foreword

Introduction and applicability

1. In the UK, Air Traffic Services (ATS) are provided by many civilian and military ATS providers to a variety of airspace users including Commercial Air Transport (CAT) operators, General Aviation (GA) and military pilots. The suite of ATS detailed in this document together form the UK Flight Information Services (FIS). These ATS (excluding aerodrome ATS) are the only ATS provided outside controlled airspace within the UK Flight Information Region (FIR). Therefore this document is equally applicable to all civilian and military pilots, who operate in Class G airspace, and to all controllers/Flight Information Service Officers (FISOs) who provide an ATS to them. Where notified, elements of the UK FIS are also provided to aircraft operating in Class E airspace and in airspace where the background airspace classification may be other than Class G, e.g. active Managed Danger Areas (MDA) and Temporary Reserved Areas (TRA).

Purpose and scope

2. The overall purpose and scope of this document is to:
 - provide a single set of clearly defined procedures for use by all controllers/FISOs and pilots;
 - provide guidance material to support the procedures to enable common and consistent application of the ATS;
 - ensure that the responsibilities of the controller/FISO and the pilot are clearly defined, particularly with regard to duty of care, collision avoidance and terrain clearance; and
 - ensure that UK FIS regulations are published in one single policy document to prevent divergence of procedures.

Relationship to ICAO Standards and Recommended Practices

3. ICAO defines FIS as ‘a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights’. Within the UK, the scope of FIS, as defined in ICAO Annex 11, and transposed into European Law through Implementing Regulation (EU) No. 923/2012, is met through the application of any of the UK FIS. However, additional information and/or advice to airspace users are provided to meet their specific requirements in UK Class G airspace, and ICAO/SERA requirements for the provision of traffic information as far as practical to VFR flights in Class E airspace. The suite of ATS together form the UK FIS as detailed in this document.

Document structure

4. Within this document, regulations are paragraph numbered. Associated guidance material is provided in italics below a regulation where appropriate.

Interpretation of words

5. To avoid any misunderstanding within this document, certain words are to be interpreted as having specific meanings when they are the operative words in an instruction.

‘shall’ and ‘must’	mean that the instruction is mandatory
‘should’	means that it is strongly advisable that an instruction is carried out; it is recommended or discretionary. It is applied where the more positive ‘shall’ is unreasonable but nevertheless a controller/FISO/pilot would have to have good reason for not doing so.
‘may’	means that the instruction is permissive, optional or alternative, e.g. ‘a controller may seek assistance...’ but would not if he did not need it.
‘will’	is used for informative or descriptive writing, e.g. ‘pilots will file...’, is not an instruction to the controller.

6. Definitions and abbreviations used in this document are defined within CAP 1430 the UK Air Traffic Management (ATM) Vocabulary.

Gender

7. In the interests of simplicity, any reference to the masculine gender can be taken to mean either male or female.

Duty of care

8. In association with the development of the procedures within this document, a formal review of liability, negligence and duty of care in ATS provision was jointly conducted by CAA, MOD, Airport Operators' Association (AOA) and NATS legal experts. This process generated guidance for controllers/FISOs as detailed at Appendix A. The procedures in this document have been produced with this guidance in mind.

Regulatory oversight

9. Regulatory oversight of CAP 774 is the joint responsibility of the CAA and MAA and any amendment to these procedures is subject to joint agreement being reached.

Enquiries

Any enquiries about the content of CAP 774 should be addressed to:

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Chapter 1

ATS Principles

Introduction

- 1.1 It is essential that the ATS Principles are read in conjunction with the specific ATS as they underpin and apply equally across the suite of UK FIS.
- 1.2 Regardless of the ATS being provided, pilots are ultimately responsible for collision avoidance and terrain clearance. ATS provision is constrained by the nature of the airspace environment in which the flight takes place. It is not mandatory for a pilot to be in receipt of an ATS in Class E/G airspace and this generates an unknown traffic environment in which controller/FISO workload cannot be predicted and where pilots may make sudden manoeuvres, even when in receipt of an ATS.

A FISO cannot provide an ATS to an aircraft inside controlled airspace; the aircraft should be transferred to the appropriate ATSU's frequency before the aircraft enters controlled airspace.

Duty of care

- 1.3 Nothing in this CAP prevents controllers from using their own discretion, initiative and professional judgement in response to unusual circumstances, which may not be covered by the procedures herein. In dealing with any such situations, controllers/FISO shall take account of the duty of care requirements at Appendix A.

The nature of the ATS task in providing the UK FIS means that it is not possible to be totally prescriptive about all actions to be taken, particularly with regard to unknown traffic and the passing of advice and warnings on high risk conflictions to pilots who have requested Basic Service and Traffic Service. Consequently, there is a need for controllers/ FISOs to remain free to use their professional judgement to determine the best course of action for them to take for any specific situation.

The ATS

- 1.4 The specific ATS (Basic Service, Traffic Service, Deconfliction Service, Procedural Service) are designed to cater for a wide variety of airspace users and tasks and shall be consistently applied by controllers/FISOs and complied with by pilots.

The UK FIS specify the varying degrees of traffic information and deconfliction instructions or advice that controllers/FISOs pass to assist the pilot in discharging his responsibility for collision avoidance. The ATS definitions also include terrain clearance requirements in order for specific ATS to be provided and the occasions when controller/FISOs shall not provide headings or levels.

The conditions for the provision of deconfliction in Class G airspace and ATS in Class E airspace are predicated on flight rules. Deconfliction Service and Procedural Service are only available to flights in Class G airspace operating under IFR. Basic Service and Traffic Service are available to flights in Class G airspace operating under both IFR and VFR and in Class E airspace operating under VFR.

ATS provision

- 1.5 Controllers shall make all reasonable endeavours to provide the ATS that a pilot requests. However, due to finite ATS provider resources or controller workload, tactical priorities may influence ATS availability or its continued provision. Therefore, a reduction in traffic information and/or deconfliction advice may have to be applied, and in some circumstances an alternative ATS may have to be provided in order to balance overall ATS requirements. FISOs are not licensed to provide Traffic Service, Deconfliction Service, or Procedural Service. Therefore, pilots are not to request any of these ATS from a FISO unit.

FISO units are established to provide ATS at notified aerodromes and Area Control Centres (ACC), and can be identified by the RTF suffix 'Information', e.g. 'London Information'.

Compliance requirements

- 1.6 The ATS definitions and conditions described in this document are inherently agreed as part of the request for, and provision of, that ATS. Instructions issued by controllers/FISOs to pilots operating outside controlled airspace are not mandatory; however, the ATS rely upon pilot compliance with the specified terms and conditions so as to promote a safer operating environment for all airspace users.

Agreements

- 1.7 Agreements can be established between a controller (not a FISO due to limits of the licence) and a pilot on a short-term tactical basis, such that the operation of an aircraft is laterally or vertically restricted beyond the core terms of the Basic Service or Traffic Service. This is for the purposes of co-ordination and to facilitate the safe use of airspace, particularly those airspace users with more stringent deconfliction requirements. In agreeing to a course of action, pilots must take into account their responsibilities as defined under the Rules of the Air, including that for terrain clearance. Unless safety is likely to be compromised, a pilot shall not deviate from an agreement without first advising and obtaining a response from the controller. Controllers shall remove restrictions as soon as it is safe to do so.

Agreements may be made which restrict aircraft to a specific level, level band, heading, route, or operating area.

Controllers should be aware that not all requests for an agreement will be accepted and they should try to take account of the pilot's operating requirements whenever possible. Consequently, controllers should avoid excessive or unnecessary use of agreements and be prepared to act accordingly if an agreement is not met.

Appropriate type of ATS

- 1.8 A pilot shall determine the appropriate ATS for the various phases and conditions of flight and request that ATS from the controller/FISO. If a pilot fails to request an ATS, the controller/FISO should normally ask the pilot to specify the ATS required, apart from the following circumstances:
- FISOs will only provide a Basic Service;
 - Controllers at approved ATC Units that do not have surveillance equipment available will routinely apply a Procedural Service to aircraft carrying out IFR holding, approach and/or departure procedures;
 - Where ATC are unable to provide the full range of UK FIS to aircraft about to leave controlled airspace, a controller should specify the ATS that are available.

Standard application of ATS

- 1.9 Fundamental to the provision of the UK FIS is the standard application of the ATS to prevent the boundaries between the ATS becoming confused. Agreement to provide an ATS and acknowledgement of that level of ATS by a controller/FISO and pilot respectively, establishes an accord whereby both parties will abide with the definitions of that ATS as stated herein. Once an accord has been reached the controller/FISO shall apply that ATS as defined. If a pilot subsequently requires elements of a different ATS, a new accord shall be negotiated. Where there is a need for local procedures to be promulgated that are at variance to CAP 774, these will be subject to regulatory approval.

By incorporating elements of another ATS to that agreed, there is a danger that pilots will come to routinely expect those elements as a part of that ATS. This could lead to pilots requesting an inappropriate ATS for the flight profile or flight conditions in the future. Therefore, pilots should not expect, nor ask, controllers/FISOs to provide any element of another ATS; likewise, controllers/FISOs should not offer nor provide elements of any other ATS.

Reduced traffic information/deconfliction advice

- 1.10 There may be circumstances that prevent controllers/FISOs from passing timely traffic information and/or deconfliction advice, e.g. high workload, areas of high traffic density, unknown aircraft conducting high energy manoeuvres, or when traffic is not displayed to the controller or is obscured by surveillance clutter. Controllers/FISOs shall inform the pilot of reductions in traffic information along with the reason and the probable duration; however, it may not always be possible to provide these warnings in a timely fashion.

In high workload situations, which may not always be apparent from RTF loading, controllers/FISOs may not always be able to provide timely traffic information and/or deconfliction advice. High workload situations may not necessarily be linked to high traffic density.

High traffic density can cause difficulty interpreting ATS surveillance system data and may affect RTF loading or controller/FISO workload to the extent that the controller/FISO is unable to pass timely traffic information and/or deconfliction advice on all traffic.

Where aircraft are operating close to the lateral and/or vertical limits of solid ATS surveillance system cover, or close to a radar overhead, there is the potential for conflicting traffic to be detected late. Similarly, there is potential for aircraft to be undetected or detected late in known areas of poor surveillance

performance, permanent echoes, weather clutter or when the controller suspects the performance of the ATS surveillance system is degraded.

Surveillance clutter may be generated by: weather, anomalous propagation, ground/sea returns, birds, wind turbine effects, and radar countermeasures such as chaff. In areas of clutter, the ability to detect conflicting aircraft is reduced.

Where primary radar is unavailable, and SSR alone is used to provide an ATS, non- transponding aircraft will not be detected; therefore ATC will not be able to warn pilots of their proximity.

Alerting service

- 1.11 An Alerting Service shall be provided in association with all UK FIS.

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Chapter 2

Basic Service

Definition

- 2.1 A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.

Provision

- 2.2 Controllers and FISOs may provide a Basic Service. Controllers may utilise ATS surveillance system derived information in the provision of a Basic Service. A FISO shall not utilise surveillance-derived data to provide traffic information when providing a Basic Service. The use of surveillance equipment by FISOs for other specific tasks is subject to regulatory approval.

Flight rules and meteorological conditions

- 2.3 Basic Service is available under IFR outside controlled airspace in any meteorological conditions, or under VFR.

Pilots should be aware that Basic Service might not be appropriate for flight in IMC or where lookout is constrained by other factors, when other ATS are available.

Identification

- 2.4 A controller may identify an aircraft to facilitate co-ordination or to assist in the provision of generic navigational assistance, but is not required to inform the pilot that identification has taken place.

Identification of an aircraft in receipt of a Basic Service does not imply that an increased level of ATS is being provided or that any subsequent monitoring will take place.

Controllers may allocate SSR codes to aircraft in receipt of a Basic Service. The issuance of such a code does not constitute the provision of a surveillance ATS.

Traffic information

- 2.5 Given that the provider of a Basic Service is not required to monitor the flight, pilots should not expect any form of traffic information from a controller/FISO. A pilot who considers that he requires a regular flow of specific traffic information shall request a Traffic Service.
- 2.6 However, where a controller/FISO has information that indicates that there is aerial activity in a particular location that may affect a flight, in so far as it is practical, they should provide traffic information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller/FISO unless the situation has changed markedly, or the pilot requests an update.
- Traffic information in general terms could include warnings of aerial activity in a particular location:*
- *Intense gliding activity over Smallville*
 - *multiple aircraft known to be operating 15 miles north of Smallville*
 - *PA28 estimating CPT at 25, altitude 2000 feet*
 - *fast jet reported routing from Smallville to Midtown below altitude 500 feet*
 - *helicopter conducting power line inspection 5 miles north of Borton below altitude 500 feet*
- 2.7 A controller with access to surveillance-derived information shall avoid the routine provision of traffic information on specific aircraft but may use that information to provide a more detailed warning to the pilot.
- 2.8 If a controller/ FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot (SERA.9005(b)(2) and GM1 SERA.9005(b)(2)).
- 2.9 Whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

Deconfliction

- 2.10 Deconfliction is not provided under a Basic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested. A controller shall make all reasonable endeavours to accommodate this request as soon as practicable

Terrain

- 2.11 Basic Service is available at all levels and the pilot remains responsible for terrain clearance at all times. Agreements may be made with pilots to fly at any level, without the requirement for a reminder of terrain clearance responsibility to be passed to the pilot.

Headings

- 2.12 Unless the pilot has entered into an agreement with a controller to maintain a specific course of action, a pilot may change heading or routing without advising the controller. Other than for the purposes of identification, a controller shall not issue specific heading instructions; however, generic navigational assistance may be provided on request. The controller is not obliged to provide such assistance and the pilot must not rely on its provision as part of a Basic Service.

Generic navigational assistance may include information relative to the position of significant navigational features and information on routings as requested by the pilot. If the controller has access to an ATS surveillance system and has the capacity, he may facilitate the provision of generic navigational assistance by identifying the aircraft and providing suggested track information. Additionally, bearings utilising direction finding equipment, i.e. QDM/QTE, may be provided subject to ATC equipment capability. Alternative routings may be suggested to assist the pilot in remaining clear of notified airspace reservations, e.g. "Suggest re-route to the west to remain clear of active danger area".

Levels

- 2.13 Unless the pilot has entered into an agreement with a controller to maintain a specific level or level band, a pilot may change level without advising the controller/FISO.

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Chapter 3

Traffic Service

Definition

- 3.1 A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.

Provision

- 3.2 A Traffic Service shall only be provided by a controller with access to an ATS surveillance system.

Flight rules and meteorological conditions

- 3.3 Traffic Service is available under IFR outside controlled airspace in any meteorological conditions, or under VFR. If a controller issues a heading and/or level that would require flight in IMC, a pilot who is not suitably qualified to fly in IMC shall inform the controller and request alternative instructions.

Pilots should be aware that a Traffic Service might not be appropriate for flight in IMC or where lookout is significantly constrained by other factors, when other ATSS are available.

Identification

- 3.4 The controller shall identify the aircraft, inform the pilot that he is identified, and maintain identity. If identity is lost the pilot shall be informed and the controller shall attempt to re-establish identity as soon as practicable.

Traffic information

- 3.5 The controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass traffic information, and the timeliness of such information.

Traffic is normally considered to be relevant when, in the judgement of the controller, the conflicting aircraft's observed flight profile indicates that it will pass within 3 NM and, where level information is available, 3,000 ft of the aircraft in receipt of the Traffic Service or its level-band if manoeuvring within a level block. However, controllers may also use their judgment to decide on occasions when such traffic is not relevant, e.g. passing behind or within the parameters but diverging. Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5 NM, in order to give the pilot sufficient time to meet his collision avoidance responsibilities and to allow for an update in traffic information if considered necessary.

Controller judgement is essential to ensure that traffic information is relevant and timely. Controllers should take account of the aircraft's relative speeds, lateral and vertical closure rates, and track histories.

Distances displayed on ATS surveillance systems can be at variance to the actual distances between aircraft due to the limitations in accuracy of surveillance systems. Furthermore, some aircraft may not be displayed at all by ATS surveillance systems.

Deconfliction

- 3.6 Deconfliction is not provided under a Traffic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested. The controller shall make all reasonable endeavours to accommodate this request as soon as practicable.

When providing headings/levels for the purpose of positioning and/or sequencing or as navigational assistance, the controller should take into account traffic in the immediate vicinity based on the aircraft's relative speeds and closure rates, so that a risk of collision is not knowingly introduced by the instructions passed. However, the controller is not required to achieve defined deconfliction minima and pilots remain responsible for collision avoidance even when being provided with headings/levels by ATC.

Terrain

- 3.7 Subject to ATS surveillance system coverage, Traffic Service may be provided below ATC unit terrain safe levels; however, pilots remain responsible for terrain clearance at all times. Other than when following a notified instrument flight procedure, a pilot intending to descend below the ATC unit terrain safe level shall be reminded that he remains responsible for terrain clearance.

Headings

- 3.8 A pilot may operate under his own navigation or a controller may provide headings for the purpose of positioning, sequencing, or as navigational assistance.
- 3.9 When operating under their own navigation, pilots may alter course as required; however, unless safety is likely to be compromised, pilots shall not change their general route or manoeuvring area without first advising and obtaining a response from the controller.
- 3.10 When following an ATC heading, unless safety is likely to be compromised, a pilot shall not change heading without first advising and obtaining a response from the controller, as the aircraft may be coordinated against other airspace users without recourse to the pilot. If an ATC heading is unacceptable to the pilot he shall advise the controller immediately. Pilots remain responsible for collision avoidance even when in receipt of ATC headings and shall advise the controller in the event that they need to deviate from a heading in order to comply with Rules of the Air with regard to collision avoidance. Controllers shall only instigate heading allocations when the aircraft is at or above an ATC unit's terrain safe level. However, if pilots request a heading from the controller whilst operating below the ATC unit terrain safe level, this may be provided as long as the controller reminds the pilot that he remains responsible for terrain clearance.

Levels

- 3.11 Pilots may select their own operating levels or may be provided with level allocations by the controller for the positioning and/or sequencing of traffic or for navigational assistance. If a level is unacceptable to the pilot he shall advise the controller immediately. Unless safety is likely to be compromised, a pilot shall not change level or level band without first advising and obtaining a response from the controller, as the aircraft may be co-ordinated against other airspace users without recourse to the pilot. Pilots remain responsible for collision avoidance, even when flying at a level allocated by ATC and shall advise the

controller in the event that they need to deviate from a level in order to comply with the Rules of the Air with regard to collision avoidance. Levels allocated by controllers shall be terrain safe in accordance with the ATC unit terrain safe levels, unless an agreement is reached with the pilot, or such levels form part of VFR clearance for aerodrome arrival or to enter controlled airspace that by necessity require flight below the unit terrain safe levels; in such circumstances, the instruction shall be accompanied by a reminder that the pilot remains responsible for terrain clearance.

In order to reduce RT loading and increase flexibility, pilots who require to frequently change level whilst receiving a Traffic Service should request a level 'block' to operate within.

Chapter 4

Deconfliction Service

Definition

- 4.1 A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/ or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility.

Provision

- 4.2 A Deconfliction Service shall only be provided by a controller with access to an ATS surveillance system.

Flight rules and meteorological conditions

- 4.3 A Deconfliction Service shall only be provided to flights under IFR outside controlled airspace, irrespective of meteorological conditions. The controller will expect the pilot to accept headings and/or levels that may require flight in IMC. A pilot who is not suitably qualified to fly in IMC shall not request a Deconfliction Service unless compliance permits the flight to be continued in VMC.

Pilots that do not require ATC deconfliction advice or deconfliction minima to be applied should not request a Deconfliction Service.

- 4.4 Pilots operating VFR and requiring an ATS shall request a Basic Service or a Traffic Service as appropriate to the phase or conditions of flight.

Identification

- 4.5 The controller shall identify the aircraft, inform the pilot that he is identified, and maintain identity. If identity is lost, the pilot shall be informed and the controller shall attempt to re-establish identity as soon as practicable.

Traffic information

- 4.6 The controller may, subject to workload, pass traffic information on deconflicted traffic in order to improve the pilot's situational awareness.

Deconfliction

- 4.7 A controller shall provide traffic information, accompanied with a heading and/or level aimed at achieving a planned deconfliction minima against all observed aircraft in:

- Class G airspace;
- active Temporary Reserved Areas (TRA);
- active Military Training Areas (MTA).

- 4.8 Controllers are not required to provide deconfliction advice on aircraft within adjacent controlled airspace (excepting active TRA/MTA) unless surveillance-derived or other information indicates that such aircraft are leaving controlled airspace; however, controllers may pass traffic information.

- 4.9 Military controllers providing radar to visual recoveries are not required to apply deconfliction minima against aircraft conducting instrument approaches when within a MATZ, subject to the conditions specified in the Manual of Military ATM.

Although active TRA and MTA are controlled airspace, autonomous flight is permitted and UK FIS are provided.

- 4.10 The deconfliction minima against unco-ordinated traffic are:

- 5 NM laterally (subject to surveillance capability and regulatory approval);
or
- 3,000 ft vertically and, unless the SSR code indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge. (Note: Mode C can be assumed to have been verified if it is associated with a deemed validated Mode A code. The Mode C data of aircraft transponding code 0000 is not to be utilised in assessing deconfliction minima).

- 4.11 The deconfliction minima against aircraft that are being provided with an ATS by the same controller, or that have been subject to co-ordination, are:
- 3 NM laterally (subject to surveillance capability and regulatory approval); or
 - 1,000 ft vertically; (2,000 ft within active MDA/MTA above FL410, and above FL290 where both aircraft are not RVSM approved); or
 - 500 ft vertically (subject to regulatory approval).

- 4.12 High controller workload or RTF loading may reduce the ability of the controller to pass deconfliction advice and the timeliness of such information. Furthermore, unknown aircraft may make unpredictable or high-energy manoeuvres. Consequently, it is recognised that controllers cannot guarantee to achieve these deconfliction minima; however, they shall apply all reasonable endeavours.

In areas of high traffic density, a Deconfliction Service may still be provided, despite the controller considering it unlikely that deconfliction minima will be able to be achieved. In such circumstances controllers should provide an associated notification to the pilot of reduced traffic information and deconfliction advice should be given.

- 4.13 The pilot shall inform the controller if he elects not to act on the controller's deconfliction advice. The pilot then accepts responsibility for initiating any subsequent collision avoidance against that particular conflicting aircraft. However, the controller is not prevented from passing further information in relation to the conflicting traffic, if in his opinion it continues to constitute a definite hazard.

Distances displayed on ATS surveillance systems can be at variance to the actual distances between aircraft due to the limitations in accuracy of surveillance systems. Consequently, lateral deconfliction minimum may have to be greater than those specified above, as detailed in a unit's regulatory approval. Furthermore, some aircraft may not be displayed at all by ATS surveillance systems.

Terrain

- 4.14 A Deconfliction Service shall only be provided to aircraft operating at or above the ATC unit's terrain safe level, other than when a controller at an Approach Control unit provides an ATS to aircraft on departure from an aerodrome and climbing to the ATC unit's terrain safe level, or to aircraft following notified instrument approach procedures. In all other circumstances, if a pilot requests descent below ATC unit terrain safe levels, controllers shall no longer provide a

Deconfliction Service but should instead, subject to surveillance and RTF coverage, apply a Traffic Service and inform the pilot. If an approach controller detects a confliction when an aircraft is below the ATC unit terrain safe level whilst departing from an aerodrome and climbing to the ATC unit terrain safe level, or when following notified instrument approach procedures, traffic information without deconfliction advice shall be passed. However, if the pilot requests deconfliction advice, or the controller considers that a definite risk of collision exists, the controller shall immediately offer such advice as follows:

- For aircraft on departure, controllers shall provide avoiding action advice and a terrain warning.
- For aircraft conducting pilot interpreted instrument approaches, controllers shall provide avoiding action advice and an associated terrain safe level to climb to or fly at. It is assumed that conformity with such advice will necessitate repositioning.
- For aircraft being provided with Ground Controlled and Surveillance Radar Approaches:
 - If the terrain safe area for the procedure is known to the controller or indicated on the surveillance display, avoiding action may be passed without an associated climb instruction, as long as the controller ensures that the aircraft remains within the terrain safe area, and the turn instruction is such that the controller considers that the approach can be continued without the need for repositioning.
 - If the controller anticipates that the avoiding action turn will result in flight outside the terrain safe area or the approach not being able to be completed, a terrain safe level to fly at will also be provided, and repositioning will be necessary.

When aircraft are in the initial stages of departure or on final approach, due to limited aircraft manoeuvrability, controllers need to balance the safety impact of passing deconfliction advice at these critical stages of flight against the risk of collision presented by conflicting aircraft. Consequently, deconfliction minima do not apply in these constrained circumstances and avoiding action is instead aimed at preventing collision. Furthermore, controllers need to be aware of the high flight deck workload that is likely to be present in the event of avoiding action which is at variance to the published missed approach procedure being followed.

The procedures regarding deconfliction advice to aircraft on initial departure and final approach are designed to cater for 'pop up' conflictions over which the controller has no advance warning due to the uncontrolled nature of Class G airspace. Controllers should attempt to co-ordinate and deconflict observed traffic prior to allowing either the departure of an aircraft that is expected to

require Deconfliction Service, or the final approach of an aircraft that is already receiving a Deconfliction Service.

Where aircraft are transferred to the Aerodrome Controller once established on final instrument approach, ATC units should use internal ATC liaison processes to ensure that warnings of conflicting traffic are passed in a timely fashion to the pilot.

Headings

- 4.15 A pilot may operate under his own navigation or a controller may provide headings for the purpose of positioning, sequencing, navigational assistance, or to achieve deconfliction minima. If a heading is unacceptable to the pilot he shall advise the controller immediately. Unless safety is likely to be compromised, a pilot shall not alter course without first obtaining approval from the controller, as the flight profile may have been co-ordinated against other airspace users without recourse to the pilot.

Levels

- 4.16 Controllers will normally provide level allocations for positioning, sequencing, navigational assistance, or to achieve deconfliction minima. If a level is unacceptable to the pilot, he shall advise the controller immediately. Unless safety is likely to be compromised, a pilot shall not change level without first obtaining approval from the controller, as an aircraft's flight profile may be co-ordinated against other airspace users without recourse to the pilot.

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Chapter 5

Procedural Service

Definition

- 5.1 A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions, and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.

A Procedural Service does not require information derived from an ATS surveillance system. Therefore, due to the ability for autonomous flight in Class G airspace, pilots in receipt of a Procedural Service should be aware of the high likelihood of encountering conflicting traffic without warnings being provided by ATC.

Pilots flying in the vicinity of aerodromes, ATS routes, or navigational aids where it is known that a Procedural Service is provided, are strongly encouraged to attempt to establish RTF contact with the notified ATS provider.

Provision

- 5.2 A Procedural Service shall only be provided by controllers at ATC units with Regulatory approval to provide such an ATS. Controllers at ATC units that do not have surveillance information available may routinely apply Procedural Service to pilots of aircraft carrying out IFR holding, approach and/or departure procedures without the need to first elicit the pilots' requirements.

Not all ATC units are able to provide a Procedural Service. However, Procedural Service is most commonly available from ATC units without surveillance equipment that also have notified IFR arrival, departure or en-route procedures. At such units, Procedural Service offers the greatest protection to pilots.

Subject to Regulatory approval, controllers at ATC units that are equipped with surveillance equipment may also provide a Procedural Service. This is most frequently applied to aircraft previously in receipt of a surveillance ATS where track identity may not be maintained, or when surveillance equipment is not available.

Flight rules and meteorological conditions

- 5.3 A Procedural Service shall only be provided to flights under IFR, irrespective of meteorological conditions. The controller will expect the pilot to accept levels, radials, tracks, routes and time allocations that may require flight in IMC. A pilot who is not suitably qualified to fly in IMC shall not request a Procedural Service unless compliance permits the flight to be continued in VMC.

Pilots should be aware that under a Procedural Service, high reliance is placed on the pilot's ability to accurately follow radial, track, route and time allocations to achieve planned deconfliction minima. Therefore, pilots who are not able to accept such allocations should not request a Procedural Service.

Identification

- 5.4 Aircraft do not need to be identified in order for a Procedural Service to be provided.

Controllers may allocate a notified SSR conspicuity code to assist adjacent surveillance equipped ATC units in ascertaining that the aircraft is in receipt of a ATS from the particular ATS provider. In such circumstances, the issuance of such a code does not constitute the provision of a surveillance ATS.

Traffic information

- 5.5 The controller shall provide traffic information, if it is considered that a confliction may exist, on aircraft being provided with a Basic Service and those where traffic information has been passed by another ATS unit; however, there is no requirement for deconfliction advice to be passed, and the pilot is wholly responsible for collision avoidance. The controller may, subject to workload, also provide traffic information on other aircraft participating in the Procedural Service, in order to improve the pilot's situational awareness.

Under a Procedural Service, the controller has no ability to pass traffic information on any aircraft that he is not in communication with, unless he has been passed traffic information by another ATS unit.

Traffic information provided under a Procedural Service is unlikely to be as accurate as that provided by controllers using surveillance equipment.

Therefore, pilots should be alert to the potential to incorrectly correlate the traffic information to other aircraft that they have in sight that are actually unknown to the controller.

Deconfliction

5.6 A controller shall provide deconfliction instructions by allocating levels, radials, tracks, routes and time restrictions, or use pilot position reports, aimed at achieving a planned deconfliction minima from other aircraft to which the controller is providing a Procedural Service in Class G airspace.

5.7 The deconfliction minima are:

- 1,000 ft vertically; or
- 500 ft vertically (subject to regulatory approval); or
- those lateral and longitudinal criteria listed in CAP 493 as lateral and longitudinal separation standards.

5.8 High controller workload or RTF loading may reduce the ability of the controller to pass deconfliction advice, and the timeliness of such information.

5.9 In the event that an aircraft that requires a Procedural Service makes contact with the controller whilst already within the deconfliction minima, controllers shall pass traffic information to all affected aircraft. In such circumstances, it is recognised that controllers cannot guarantee to achieve deconfliction minima; however, they shall apply all reasonable endeavours to do so as soon as practical.

5.10 Deconfliction advice cannot be provided against unknown aircraft.

5.11 The pilot shall inform the controller if he elects not to act on the controller's deconfliction advice, and the pilot then accepts responsibility for initiating any subsequent collision avoidance against the aircraft in question and any other aircraft affected. However, the controller is not prevented from passing further information in relation to the conflicting traffic if in his opinion it continues to constitute a definite hazard.

Pilots must remain alert to the fact that whilst in receipt of a Procedural Service, they may encounter conflicting aircraft for which neither traffic information nor deconfliction advice has been provided. Pilots must still comply with Rules of the Air with regard to the avoidance of aerial collisions and advise ATC of any deviation from their clearance in order to do so. Additionally, the adequacy of ATC deconfliction advice relies on compliance by pilots and, in the non-surveillance environment, ATC are unable to recognise when pilot position reports are inaccurate or incorrect.

5.12 Controllers may, subject to workload, initiate agreements (as defined in ATS Principles) with pilots of aircraft under a Basic Service to restrict their flight profile in order to co-ordinate them with aircraft in receipt of a Procedural Service. However, controllers shall limit the occasions on which they make such

agreements to those where it is clear that a confliction exists, and only when controller workload permits.

Terrain

- 5.13 A Procedural Service is available at all levels and the pilot remains wholly responsible for terrain clearance at all times. However, if a pilot wishes to operate below ATC unit terrain safe levels, unless on departure from an aerodrome when climbing to the ATC unit's terrain safe level, or when following notified instrument approach procedures, controllers shall advise the pilot of the terrain safe level and remind him of his terrain responsibilities.

Lateral, longitudinal and time restrictions

- 5.14 A controller may provide radials, tracks, routes or time restrictions, for the purpose of positioning, sequencing, navigational assistance, or to achieve deconfliction minima. If a radial, track, route or time restriction is unacceptable to the pilot, he shall advise the controller immediately. Unless safety is likely to be compromised, a pilot shall not change radial, track, route or time restriction without first obtaining approval from the controller, as the flight profile may have been co-ordinated against other airspace users without recourse to the pilot. Where a controller uses geographical or airspace reporting points to determine and provide lateral deconfliction between flights, the pilot shall ensure, to the best of his ability, that requested or required position reports are accurate.

Levels

- 5.15 Controllers will normally provide level allocations for positioning, sequencing, navigational assistance, or to achieve deconfliction minima. If a level is unacceptable, the pilot shall advise the controller immediately. Unless safety is likely to be compromised, a pilot shall not change level without first obtaining approval from the controller, as an aircraft's flight profile may be co-ordinated against other airspace users without recourse to the pilot.

Approach clearances and holding instructions

- 5.16 Controllers shall provide approach clearances and holding instructions to aircraft conducting IFR arrival procedures for the purposes of sequencing and/or to achieve deconfliction minima.

APPENDIX A

Duty of care

Background

A1 In association with the development of the procedures within this document, a formal review of liability, negligence and duty of care in air traffic ATS provision was jointly conducted by CAA, MOD, AOA and NATS legal experts. This process has generated guidance for ATS providers, and their personnel, as detailed below. The procedures in this document have been produced with this guidance in mind.

Common law

A2 'Common law' is a judge-made law, which has built up through the courts over the centuries; it is distinct and separate from laws made by statute (i.e. Acts of Parliament). Under common law a person is under a general obligation to take reasonable care to avoid acts or omissions that he can reasonably foresee as being likely to damage something or injure someone to whom he owes a duty of care. If there is a breach of this general obligation and damage or "loss" results, the person who has been injured or suffered property damage will be able to make a "negligence claim" for compensation. For a negligence claim to be viable, a claimant must prove that:

- a person has been negligent (i.e. has failed to take reasonable care); and
- loss or injury is suffered by some other person as a result; and
- the negligent person owed a duty of care to the claimant who has suffered loss or injury.

Common law is applicable to ATS personnel in the delivery of their core work task, in the same way that it is applicable to all other professions and members of the public in their general conduct and day-to-day activities.

In interpreting common law in relation to the provision of ATS, it would be unwise to rely on specific examples, as each case has to be taken on its own unique merit and circumstances.

Establishing whether a duty of care is owed

A3 To decide if a duty of care is owed by one person to another, the courts will consider the three criteria which were set out in the 1990 case of *Caparo Industries v Dickman*:

- First the loss suffered must have been “reasonably foreseeable”;
- Second, there must be “proximity” between the claimant and the person who has been negligent. This means that the person who is alleged to have been negligent was in a position to exercise some control over the events that have led to the claimant’s loss.
- Third, it must be fair, just and reasonable to impose a duty of care.

Controllers/FISOs clearly owe duty of care to flight crew, passengers, and the general public on the ground, in the delivery of an ATS. However, the depth and boundaries of this duty of care cannot be defined in advance for each specific scenario and situation, as they will vary depending on the exact circumstances at the time, including: the type of airspace, type of ATS, dynamics of the situation (i.e. how ‘foreseeable’ was the event?). The only time that these factors will ultimately be decided upon is in court when examining the specifics of the situation under scrutiny.

How should the duty of care be discharged?

A4 Establishing whether or not there is a duty of care is however only the first step. The next question is how to discharge that duty of care (i.e., how careful do you have to be?). Although every case depends upon its particular facts, there is one key question that normally arises: is there any relevant set of standards or procedures? If there is, the issue of whether or not a person has discharged his duty of care is likely to be heavily influenced by whether or not he has complied with those relevant standards and procedures. If there are no relevant standards or procedures, it may be more difficult to establish whether or not a person has acted appropriately.

Duty of care requirements have been a primary consideration in the production of the procedures in this document and, where possible, specific actions have been published that are considered to meet these requirements. However, the nature of the ATS task in providing the UK FIS means that it is not possible to be totally prescriptive about all actions to be taken, particularly with regard to unknown traffic and the passing of advice and warnings on high risk conflictions to pilots who have requested lower level ATS (i.e. Basic Service and Traffic Service). Consequently, there is a need for controllers/FISOs to remain free to

use their professional judgement to determine the best course of action for them to take for any specific situation.

A crucial element of duty of care is achieved through controllers/FISOs making all reasonable endeavours to provide the level of ATS that a pilot requests. Due to the nature of the unknown traffic environment, it is inevitable that there will be occasions when controllers are unable to meet in full the ATS definitions that a pilot expects, (i.e. due to limited surveillance capability, workload, or traffic density). In these situations, any reductions should be made clear to the pilot, and this ability is catered for in the ATS Principles for these air traffic procedures. However, these actions, taken either tactically by a controller or as a strategic measure by an ATS provider, should be in response to justifiable limitations.

Vicarious liability and indemnity for acts in the course of employment

A5 An employee will be indemnified by their employer if they are sued under a civil claim of negligence for anything they do (or fail to do) as part of the proper fulfilment of their duties as an employee. In addition, the employer is in any event generally liable for the acts and omissions of its employees (known as “vicarious liability”). However, an individual employee remains personally responsible so far as any criminal, regulatory or employment consequences are concerned. What this means is that anyone who thinks they have suffered damage as a result of something done by an employee in the course of their employment has choices: they can sue that employee as an individual; they can sue the employer; or sue both the individual and the employer. If the individual is sued, either alone or jointly with the employer, for anything they do (or fail to do) as part of the proper fulfilment of their duties as an employee, that employee is entitled to look to the employer to indemnify him.

ATS providers need to have an ongoing process to provide assurance that they have taken all reasonable steps to ensure their staff are meeting their duty of care requirements. The effective implementation and use of Quality and Safety Management Systems are means of generating such assurance.

In addition to ATS providers, the CAA/MOD also discharge a Duty of Care in the way it exercises its regulatory duties, which include establishing and monitoring ATS standards.

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