



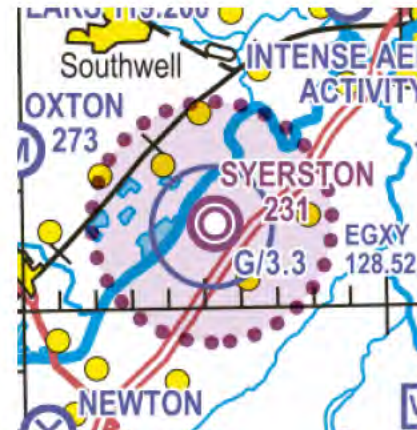
**AIRSPACE INFRINGEMENTS OF  
AERODROME TRAFFIC ZONES  
A BRIEF FOR PILOTS, ANSP AND AGCS UNITS**

# What is an Airspace Infringement?

- An airspace infringement is the unauthorised entry of an aircraft into notified airspace. This includes:
  - Controlled airspace (Permanent and Temporary)
    - CTA/TMA
    - CTR
  - Prohibited or restricted airspace (Permanent and Temporary)
  - Active danger areas (Permanent and Temporary)
  - **Aerodrome Traffic Zones (breach of Rule 11 of Rules of the Air 2015)**
  - Radio Mandatory Zones (breach of SERA 6005)
  - Transponder Mandatory Zones (breach of SERA 6005)
- There is a legal requirement to report airspace infringements.

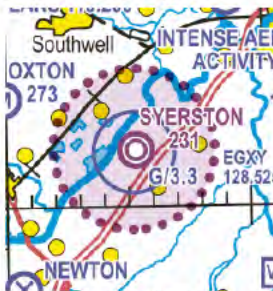
# What is an Aerodrome Traffic Zone

- An Aerodrome Traffic Zone (ATZ) is a volume of airspace established to give protection to aerodrome traffic including those aircraft at the critical stages of flight.
- Article 5 of the Air Navigation Order 2016 defines an ATZ for notified aerodrome (i.e. notified in the AIP).
- Rule 11 of The Rule of the Air Regulations 2015 applies to aerodromes which have been notified in the AIP .
- The ATZ acquires the status of the airspace classification within which it lies.



# Dimensions of an ATZ

- Over land vertically extends from the surface to 2,000 feet agl
  - Where the longest runway is greater than 1,850 metres in length the zone will normally have a radius of 2.5nm around the midpoint of the longest runway.
  - Where the longest runway is 1,850 metres or shorter in length the zone will normally have a radius of 2.0nm around the midpoint of the longest runway (exceptions do apply as per the Air Navigation Order 2016 article 5).
- With a ceiling of 2,000 feet agl (i.e. based on the QFE), overflight on the QNH is unlikely to enable pilots to avoid the ATZ.
- Around an offshore installation the zone will normally have a radius of 1.5nm to 2,000 feet amsl.



Syerston  
2,000 ft agl/2,231 feet amsl



Stapleford  
2,000 ft agl/ 2,185 feet amsl



Offshore Installation  
2,000 feet amsl

# Rule 11

- (2) An aircraft must not fly, take off or land within the aerodrome traffic zone of an aerodrome unless the commander of the aircraft has complied with paragraphs (3), (4) or (5), as appropriate.
- (3) If the aerodrome has an air traffic control unit the commander must obtain the permission of that unit to enable the flight to be conducted safely within the aerodrome traffic zone.
- (4) If the aerodrome provides a flight information service the commander must obtain information from the flight information centre to enable the flight to be conducted safely within the aerodrome traffic zone.
- (5) If there is no flight information centre at the aerodrome the commander must obtain information from the air/ground communication service to enable the flight to be conducted safely within the aerodrome traffic zone.
- (6) The commander of an aircraft flying within the aerodrome traffic zone of an aerodrome must—
  - (a) cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome; or
  - (b) if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means; and
  - (c) if the aircraft is fitted with means of communication by radio with the ground, communicate the aircraft's position and height to the air traffic control unit, the flight information centre or the air/ground communications service unit at the aerodrome (as the case may be) on entering the aerodrome traffic zone and immediately prior to leaving it.

# Notification in UK AIP

Type of Aerodrome	Applicability of Rule 11
Government aerodrome.	At such times as are notified.

## UK AIP Part 2

### En-route (ENR) 2.2 (Other Regulated Airspace)

#### ENR 2.2 OTHER REGULATED AIRSPACE

Name Lateral limits Vertical limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service Conditions of Use	Frequency Channel Purpose	Remarks
1	2	3	4	5
<b>BARKSTON HEATH ATZ</b> A circle, 2 NM radius, centred at 525747N 0003337W on longest notified runway (06/24) Upper limit: 2000 FT Lower limit: SFC Class: G	CRANWELL	<b>CRANWELL APPROACH</b> English Mon-Thu 0830-1730 (0730-1630); Fri 0830-1700 (0730-1600); Sat-Sun HJ. Other times by NOTAM.	124.450 MHz	Elevation: 367 FT. Runway length: 1831 M. Government Aerodrome.  Note: When Air Traffic Control Services are not available, control of the ATZ is transferred to Flying Club 120.425 MHz.
<b>BENSON ATZ</b> A circle, 2 NM radius, centred at 513654N 0010545W on longest notified runway (01/19) Upper limit: 2000 FT Lower limit: SFC Class: G	BENSON	<b>BENSON ZONE</b> English H24	120.900 MHz	Elevation: 203 FT. Runway length: 1825 M. Government Aerodrome.  Note 1: ATZ crossing service only available to meet operational requirements, which may include night flying.  Note 2: All aircraft are to avoid the ATZ if no contact with Benson Zone (120.900 MHz) as recreational flying, Air Ambulance & Police Heli ops H24.

# Notification in UK AIP

Type of Aerodrome	Applicability of Rule 11
An aerodrome having an air traffic control unit or flight information service centre.	During the notified hours of watch of the air traffic control unit or the flight information service centre.
A national licensed aerodrome or an EASA certificated aerodrome having an air/ground communications service unit with aircraft.	During the notified hours of watch of the air/ground communications service unit.

## UK AIP Part 3

### Aerodromes (AD) 2.17 (Air Traffic Service Airspace)

#### EGBE AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
COVENTRY ATZ A circle, 2.5 NM radius, centred at 522211N 0012847W on longest notified runway (05/23)	Upper limit: 2000 FT Lower limit: SFC	G	COVENTRY INFORMATION English	6000 FT		Coventry ATZ lies partly within the Birmingham CTA. Base of Birmingham CTA 1500 FT QNH (1233 FT QFE). See AD 2.22.

#### EGBE AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	SATVOICE number(s)	Logon Address	Hours of Operation	Remarks
1	2	3	4	5	6	7
AFIS	COVENTRY INFORMATION	123.830 MHz DOC 20 NM/6000 FT.			Fri-Wed 0900-1700 (0800-1700), Thur 0900-2000 (0800-1700).	ATZ hours coincident with AFIS hours.
OTHER	COVENTRY FIRE	121.600 MHz Non-ATS frequency.			Available when Fire vehicle attending aircraft on the ground in an emergency.	

# ATZ and Military Aerodrome Traffic Zones

## – application for civil pilots

- A Military Aerodrome Traffic Zone (MATZ) provides a volume of airspace within which increased protection may be given to aircraft in the critical stages of circuit, approach and climb-out.
- A MATZ is a circle of 5nm radius up to 3,000 feet above aerodrome level (aal) and may have stubs aligned with the selected final approach path(s).
- Stubs extend 2nm either side of the final approach track from 5nm to 10nm and extends from 1,000 feet to 3,000 feet (both aal).
- The MATZ airspace structure requires all military aircraft to obtain permission to enter.
- Although civil recognition of a MATZ is not mandatory, **pilots are to comply with the provisions of Rule 11 of the Rules of the Air Regulations 2015 in respect of the ATZ which lies within the MATZ.** (UK AIP ENR 2.2.2).
- With a ceiling of based on the QFE, overflight on the QNH is unlikely to enable pilots to avoid the ATZ.
- It is good airmanship for pilots of civil aircraft to call for a MATZ penetration prior to reaching the 5nm boundary".





# Mid-air Collision Risk Mitigation

## ATZ in Controlled airspace

- The safety barriers in place to prevent an airspace infringement leading to a mid-air collision are:
  - Controlled Airspace Infringement Tools (CAIT)
  - ATC intervention using radar
    - All ATZ in CAS are serviced by radar
  - Electronic conspicuity – Limited to participants
  - Pilot intervention using position reports Possible through Rule 11
  - Pilot intervention through lookout

# Mid-air Collision Risk Mitigation ATZ in Uncontrolled Airspace (Class G)

- The safety barriers in place to prevent an airspace infringement leading to a mid-air collision are:
  - ATC intervention using radar
    - **Approx. 2 in 3 ATZ in Class G are NOT serviced by radar.**
    - Radar is mainly only available at military aerodromes in Class G.
  - Electronic conspicuity – **Limited to participants**
  - Pilot intervention using position reports **Possible through Rule 11**
  - Pilot intervention through lookout

# ATZ Airspace Infringements 2017



<b>Total number reported</b>	<b>97</b>
Number of different ATZ infringed	34
Number Reviewed*	32
No AI Identified	1
Through ATZ with no call to Unit	25
First call was in ATZ ( 1 w/i 0.5 nm of overhead, 1 over rwy to land, 1 downwind)	4
Into ATZ and landed with no call	1
Told to remain clear of ATZ but entered due to nav error	1

\* In 2017, the only ATZ AI MORs that were reviewed by the CAA's Infringement Coordination Group were those that related to Loss of Separation, Safety Intervention Measures and repeat infringing pilot events

# ATZ Airspace Infringements 2018



<b>Total number reported</b>	<b>130</b>
Number of different ATZ infringed	31
Number Reviewed*	64
No AI Identified	7
Through ATZ with no call to Unit	39
Pilot called outside but entered without reply from AFISO	1
First call was in ATZ	10
Told to “standby” but entered – PAN in progress	1
Into ATZ and landed with no call	1
Told to remain clear of ATZ but entered	4
Through ATZ with other ATSU due to incorrect permission	1

\* In 2018, the only ATZ AI MORs that were reviewed by the CAA’s Infringement Coordination Group were those that related to Loss of Separation, Safety Intervention Measures and repeat infringing pilot events

# ATZ Airspace Infringements 2019



<b>Total number reported</b>	<b>100</b>
Number of different ATZ infringed	45
Number Reviewed*	65
No AI Identified	5
Entered ATZ but breached Rule 11 6c (not an AI)	1
Through ATZ with no call to Unit	33
Pilot called unit outside but entered without permission/information on transit/recovery	5
First call in was in ATZ	16
Into ATZ, made approach then departed, no calls	3 (2 mis-ident of aerodrome)
Told to remain clear of ATZ but entered	2

\* From 1 July 2019, all AI MORs were reviewed by the CAA from June

# ATZ Airspace Infringements 3 Year Summary



<b>Total number reported</b>	<b>327</b>
Number Reviewed*	161
No AI Identified (various reasons)	13
Entered ATZ but breached Rule 11 6c (not an AI)	1
Through ATZ with no call to Unit	97
Pilot called unit outside but entered without permission/information on transit/recovery	7
First call was in was in ATZ	30
Into ATZ and made approach (landed or departed) with no calls	5 (3 mis-ident of aerodrome)
Told to remain clear of ATZ but entered	7
Through ATZ with incorrect clearance from other ATSU	1

\* In 2019, all AI MORs were reviewed by the CAA's Infringement Coordination Group

# The Facts about Rule 11 and Airspace Infringements



## Rule 11(2)- 11(5)

(2) An aircraft must not fly, take off or land within the aerodrome traffic zone of an aerodrome unless the commander of the aircraft has complied with paragraphs (3), (4) or (5), as appropriate.

(3) If the aerodrome has an air traffic control unit the commander must obtain the permission of that unit to enable the flight to be conducted safely within the aerodrome traffic zone.

(4) If the aerodrome provides a flight information service the commander must obtain information from the flight information centre to enable the flight to be conducted safely within the aerodrome traffic zone.

(5) If there is no flight information centre at the aerodrome the commander must obtain information from the air/ground communication service to enable the flight to be conducted safely within the aerodrome traffic zone.

In 3 years (2017 – 2019) there were 327 MORs submitted as airspace infringements of ATZ

161 were reviewed by the CAA's Infringement Coordination Group

160 were subject to Rule 11(2) – as above

14 (8%) were assessed not to be airspace infringements

Around 92% were airspace infringements due to a breach of Rule 11 as follows:

63% made no call to the ATZ unit (3% made an approach to a runway).

19% made their first call inside the ATZ in breach of Rule 11 (2).

9% entered having called but were told to remain outside or were not given permission/information.

<1% was issued with an incorrect clearance by an adjacent ATSU.

# The Facts about Rule 11 and Airspace Infringements

## Rule 11(6)(c)



- (6) The commander of an aircraft flying within the aerodrome traffic zone of an aerodrome must—
- cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome; or
  - if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means; and
  - if the aircraft is fitted with means of communication by radio with the ground, **communicate the aircraft's position and height to the air traffic control unit, the flight information centre or the air/ground communications service unit at the aerodrome (as the case may be) on entering the aerodrome traffic zone** and immediately prior to leaving it.

In 3 years (2017 – 2019) there were 327 MORs submitted as airspace infringements of ATZ  
161 were reviewed by the CAA's Infringement Coordination Group  
1 was subject to Rule 11(6)(c) – as above  
<1% of MORs resulted from a breach of Rule 11(6)(c)

- The pilot did not infringe; he complied with Rule 11(2) having obtained a permission to enter the ATZ.
- The pilot failed to comply with Rule 11 as required; the pilot was notified as such.
- The pilot demonstrated poor airmanship as he was not allowing other aircraft operating in the ATZ to develop situational awareness as to his position.
- No action was taken under CAP1404 as no airspace infringement had taken place
- **Failure to comply with Rule 11 (6) erodes the safety barriers which prevent a mid-air collision.**



# How to Comply with Rule 11

- Rule 11 is means by which situational awareness can be enhanced to aircraft, ATC, AFISO and AGCS units, operating within an ATZ.
- **When Transiting:**
  1. Call the unit early and advise them of your intentions giving your route and altitude.
  2. Obtain information from a Flight Information Centre or A/G unit or a permission to enter from an ATC unit
  3. If the above cannot be obtained, remain outside the ATZ and implement Plan B to avoid
  - 4 If point 2 is achieved, call when entering the ATZ with your position and height (*e.g. "G-XXXX entering the ATZ 2 miles to the Northwest at 1,500 feet"*)
  5. If point 2 is achieved, call when, or as soon as possible, exiting the ATZ with your position and height (*e.g. ""G-XXXX leaving the ATZ 2 miles to the south at 1,500 feet"*)
- This is achieved through 2-way communication with the functions in point 2. Listening to transmissions to and regarding other aircraft does not satisfy the requirement to obtain information from the functions to enable the flight to be conducted safely as the commander of the flight will not be informed about the airspace/air traffic environment by listening to information related to other aircraft and neither intended for nor necessarily relevant to the flight which he/she commands.
- Remember that accurate position calls are essential to allow others to maintain situational awareness.
- Do not enter the ATZ unless points 2 and 4 are complied with.

# How to Comply with Rule 11

- Rule 11 is means by which situational awareness can be increased to aircraft, and ATC, AFISO and AGCS units, operating within an ATZ.
- **When Inbound:**
  1. Call the unit early and advise them of your intentions giving your route and altitude.
  2. Obtain information from a Flight Information Centre or A/G unit or a permission to enter from an ATC unit
  3. If the above cannot be obtained, remain outside the ATZ and implement Plan B to avoid
  - 4 If point 2 is achieved, call when entering the ATZ with your position and height (*e.g. "G-XXXX entering the ATZ 2 miles to the Northwest at 1,500 feet QFE"*)
  5. Join the traffic pattern as instructed or in accordance with the pattern.
- This is achieved through 2-way communication with the functions in point 2. Listening to transmissions between other aircraft and the facility in question does not satisfy the requirement to obtain information from the functions to enable the flight to be conducted safely. The commander of the flight will not be informed about the airspace/air traffic environment by listening to information related to other aircraft and neither intended for nor necessarily relevant to the flight which he/she commands.
- Remember that accurate position calls are essential to allow others to maintain situational awareness.
- Do not enter the ATZ unless points 2 and 4 are complied with.

# How to Comply with Rule 11

- Rule 11 is means by which situational awareness can be increased to aircraft, and ATC, AFISO and AGCS units, operating within an ATZ.
- **When Departing:**
  1. Call when, or as soon as possible, exiting the ATZ with your position and height (*e.g. ““G-XXXX leaving the ATZ 2 miles to the north at 2,000 feet )* .
- Remember that accurate position calls are essential to allow others to maintain situational awareness.
- Do not re-enter the ATZ unless you have obtained information from a AFISO or A/G unit or a permission to enter from an ATC unit.

# What is an ATZ infringement?

- An ATZ airspace infringement is when a pilot fails to comply with Rule 11 (2) – (5) in that he/she
  - (3) **has not** obtained the permission of that unit to enable the flight to be conducted safely within the aerodrome traffic zone if the aerodrome has an air traffic control unit.
  - (4) **has not** obtained information from the flight information centre to enable the flight to be conducted safely within the aerodrome traffic zone if the aerodrome provides a flight information service.
  - (5) **has not** obtained information from the air/ground communication service to enable the flight to be conducted safely within the aerodrome traffic zone if there is no flight information centre at the aerodrome.
- A pilot who has only obtained information by listening out rather than having obtained information by 2-way communications and has not reported entering the ATZ iaw Rule 11 (6)(c) **has infringed the ATZ and demonstrated poor airmanship.**
- A pilot who has complied with the Rule 11 (2) – (5) but has not reported entering the ATZ iaw Rule 11 (6)(c) **has not infringed the ATZ but has demonstrated poor airmanship and committed an offence.**

