

GLOSSARY OF TERMS

TERM	EXPLANATION
A-weighted decibel dB(A)	Decibel (a unit of "loudness" of a sound), "A-weighted" (which matches the frequency response of the human ear).
AGL (or agl)	Above ground level. (Height)
Air Traffic Control Service (ATC)	A service provided for the purpose of preventing collisions between aircraft, and on the manoeuvring area between aircraft and obstructions; and expediting and maintaining an orderly flow of traffic.
Air Traffic Management (ATM)	The aggregation of the airborne and ground-based functions (air traffic services, airspace management and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations.
Air Traffic Service (ATS)	A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).
Altitude (ALT)	The distance, in feet, above mean sea level. This is the standard level reference for aircraft operations and airspace design at the lower levels to overcome variations in terrain. The aircraft altimeter is set to the barometric pressure at the aerodrome which has been adjusted to take account of the aerodrome elevation (known as QNH).
Altitude Based Priorities	The Government (through the DfT) has laid out altitude-based priorities which should be taken into account when considering the potential environmental impact of airspace changes. These priorities are intended solely to inform those responsible for considering and deciding permanent changes to the UK's airspace design. They set out the environmental priorities from the surface to 4,000 feet, from 4,000 feet to 7,000 feet and above 7,000 feet.
AMSL (or amsl)	Above mean sea level (Altitude)
aRea NAVigation (RNAV)	Area navigation is a method of instrument flight rules navigation that allows an aircraft to choose any course within a network of navigation beacons, rather than navigate directly to and from the beacons. This can conserve flight distance, reduce congestion, and allow flights into airports without beacons.
ATC	Air Traffic Control
ATM	Air Traffic Management
ATZ	Aerodrome Traffic Zone. An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

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CAA	Civil Aviation Authority
Capacity	The term used to describe how many aircraft can be accommodated within an airspace area or by a runway without compromising safety or generating excessive delay.
Centreline	The nominal track of a published route
CO ₂	Carbon dioxide
Concentration	Refers to the density of aircraft flight paths over a given location. Generally, refers to high density where tracks are not spread out over a wide area. The opposite is Dispersion.
Continuous climb	A climb that is constant, i.e. without periods of level flight (sometimes referred to as "steps").
Continuous descent	A descent that is constant, without periods of level flight (sometimes referred to as "steps").
Controlled airspace	A generic term for airspace in which Air Traffic Control service is provided. There are different sub-classifications of airspace that define the types of air traffic services that are provided and the degree to which aircraft are required to participate. Aircraft flying in controlled airspace must follow instructions from Air Traffic Controllers. In the UK, Classes A-E are classed as controlled airspace. For more info see: www.nats.aero/ae-home/introduction-to-airspace
Control Area (CTA)	Controlled airspace extending upwards from a specified limit above the earth. Control Areas are situated above the Aerodrome Traffic Zone (ATZ) and afford protection over a larger area to a specified upper limit. See graphic at Figure 36, para 5.1.4.
Control Zone (CTR)	Controlled airspace extending upwards from the surface of the earth to a specified upper limit. Aerodrome Control Zones afford protection to aircraft within the immediate vicinity of aerodromes. See graphic at Figure 36, para 5.1.4.
Conventional navigation	The historic navigation standard by which aircraft fly, and procedures are designed, with reference to ground-based navigation aids.
Dispersion	Refers to the density of flight paths over a given area and generally refers to low density operations where tracks or routes are "spread out" over a wide area. The opposite of Concentration.
Distance Measuring Equipment (DME)	A transponder-based radio navigation technology that measures slant range distance by timing the propagation delay of VHF or UHF radio signals.
Final Approach Fix (FAF)	The last segment when approaching an airport is the final approach segment, which begins at the Final Approach Fix.

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Future Airspace Strategy (FAS)	The CAA's blueprint for modernising UK airspace in line with European (SESAR) and other worldwide initiatives. The CAA explains the FAS here: www.caa.co.uk/fas
General Aviation (GA)	All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire. It covers sport and recreational flying and corporate jet and non-jet flights
Holding; holding area; Holding stacks	An airspace structure where aircraft circle one above the other at 1,000 feet intervals when queuing to land.
Inertial Referencing Unit (IRU)	An inertial reference unit (IRU) is a type of inertial sensor which uses gyroscopes and accelerometers to determine a moving aircraft's change in rotational attitude (angular orientation relative to some reference frame) and translational position (typically latitude, longitude and altitude) over a period of time.
Initial Approach Fix	The point where the initial approach segment of an instrument approach begins. An instrument approach procedure may have more than one initial approach fix and initial approach segment.
Instrument Landing System (ILS)	An ILS operates as a ground-based instrument approach system that provides precision lateral and vertical guidance to an aircraft approaching and landing on a runway, using a combination of radio signals to enable a safe landing even during poor weather.
Intermediate Fix (IF)	The fix that identifies the beginning of the intermediate approach segment of an instrument approach procedure.
Lateral Navigation (LNAV)	Refers to navigating over a ground track with guidance from an electronic device that gives the pilot (or autopilot) error indications in the lateral direction only and not in the vertical direction. LNAV approaches are the most basic of RNAV approaches and as such they usually have the highest minimums.
Lateral and Vertical Navigation (LNAV/VNAV)	LNAV/VNAV approaches are for aircraft with vertical navigation capability (hence the "VNAV"). The vertical guidance is internally generated by barometric settings. A LNAV/VNAV approach is essentially a GPS version of an ILS approach.

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L_{eq}	Equivalent Continuous Sound Level - The level of hypothetical steady sound which, over the measurement period, would contain the same frequency weighted sound energy as the actual variable sound. It is used to assess long term environmental noise exposure and considers the impact of many noise events over longer periods. The extent of total noise exposure is illustrated by noise exposure contours (contours of equal L_{eq}) which are, effectively, aggregations of SEL noise footprints of individual aircraft movements.
$L_{Aeq,16h}$	The A-weighted L_{eq} measured over the 16 busiest day-time hours (0700-2300) is the normal time-period used to develop the Airport Noise Contours for day-time operations.
$L_{Aeq,8h}$	The A-weighted L_{eq} measured over the 8 night-time hours (2300-0700) is the normal time-period used to develop the Airport Noise Contours for night-time operations.
Localiser Performance with Vertical Guidance (LPV)	The highest precision GPS aviation instrument approach procedures currently available without specialized aircrew training requirements, such as required navigation performance (RNP). Landing minima are usually similar to those of a Cat I Instrument Landing System (ILS)
L_{max}	The simplest measure of a noise event, such as an aircraft overflight, is L_{max} which is the maximum sound level recorded (in dB(A)).
Low altitude airspace	A generic term to describe airspace in the vicinity of an airport containing arrival and departure procedures below 4,000 feet. Airports have primary accountability for the design of procedures in this airspace as this and the local ATC operation is largely dictated by local environmental requirements, airport capacity and efficiency.
NATS	An air traffic service provider licensed by Government to provide the air navigation services in en-route airspace which connects the airports with each other and with the airspace of neighbouring States. NATS also provides ATS, under contract, to some airports.
Nautical Mile (NM)	Aviation measures most horizontal distances in nautical miles. One nautical mile is 1852 metres, making it approximately 15% longer than a statute mile. (Aviation uses metres for some horizontal distances such as runway lengths and visibility, but the standard measurement of vertical distance is feet.)
Noise Action Plan	Noise Action Plans are Action Plans designed to manage noise issues and effects arising from aircraft departing from and arriving at an airport. Action Plans are a legal requirement under Directive 2002/49/EC relating to the Assessment and Management of Environmental Noise. The airport operators must draw up, or update, an Action Plan every five years.

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Noise contours	The depiction of noise across a period of the day as a series of contours around the airport. Aircraft noise maps, which show lines joining points of equal noise, to illustrate the impact of aircraft noise around airports. Major airports publish annually or bi-annually the noise contours for the "daytime" period (0700 to 2300). These are referred to as the L _{eq} (16 hours) noise contours.
Noise footprint	The depiction of noise from a single aircraft as a "footprint" around the airport. These are referred to as SEL footprints.
NSA	National Scenic Area
Nx contours	Nx contours (such as N65 and N60) show the locations where the number of events (i.e. flights) exceeds a pre-determined noise level, expressed in dB L _{Max} .
Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS)	PANS-OPS is contained in an ICAO Document 8168 which sets out the design criteria and rules for instrument flight procedures which include approach and departure procedures.
Performance-Based Navigation (PBN)	A generic term for modern standards for aircraft navigation capabilities (as opposed to conventional navigation standards). The design of future airspace routes and structures will be predicated on requiring a specified minimum navigation capability by all aircraft using the route or airspace structure. For more information, see www.caa.co.uk/pbn and www.eurocontrol.int/navigation/pbn
Radar Vectoring	Provision of navigational guidance to aircraft by ATC in the form of specified headings based on the use of radar.
Route	Published routes that aircraft are either 'required to' or 'plan to' follow. Routes have a nominal centreline which gives an indication of where the aircraft would be expected to fly; however, aircraft will fly along routes or route segments with varying degrees of accuracy based on a range of operational factors such as weather, aircraft weight, aircraft speed and altitude, and technical factors such as PBN specification and ATC intervention. The depiction of a nominal route on a map should not be taken as an indication that aircraft will not be seen elsewhere.
Route Network or Route Structure	The network of routes linking airports to each other and to the airspace of neighbouring States.
Runway designation	Airport runways are referenced by a 2-digit number which is derived from the orientation of the runway relative to magnetic north. For example, the runways at Glasgow Airport are orientated on a bearing of 046°M/226°M, the rounded-up reference numbers given to them are 05 and 23. Magnetic variation in the UK is gradually reducing over time.

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Single European Sky ATM Research (SESAR)	The Single European Sky ATM Research (SESAR) programme is a major public-private cross-industry initiative. It brings together the aviation industry to develop new technologies and solutions that will improve the way Europe's airspace is managed and will oversee the implementation of its modernisation.
Standard Instrument Departure procedure (SID)	A published procedure for departing aircraft to follow which links an airport or a runway at an airport to the en-route airspace structure. A SID incorporates both airport and en-route ATC requirements for the integration of departure procedures with routes to and from other airports together with the Airport Operator's noise abatement requirements in proximity to the airport. It is presented in the UK AIP in graphical format to assist pilots in briefing themselves on the procedure and levels to be flown after departure. It also includes sufficient information for loading into aircraft navigation databases for use by aircraft flight management systems.
Tactical Vectoring	Air traffic control methods which involve air traffic controllers directing aircraft off the established route structures for reasons of safety or efficiency.
Terminal Control Area (TMA)	Terminal Control Areas are Control Areas normally established at the junction of airways in the vicinity of one or more major aerodromes. The Scottish Terminal Control Area (ScTMA) is an example of this and deals with air traffic arriving and departing from Glasgow, Edinburgh and Prestwick Airports.
Uncontrolled Airspace	There are different sub-classifications of airspace that define the types of air traffic services that are provided and the degree to which aircraft are required to participate. Aircraft flying in uncontrolled airspace are not mandated to take Air Traffic Services (ATS) but can call on them if and when required (e.g. flight information, alerting and distress services). In the UK, Class G airspace is defined as uncontrolled. For more info see: www.nats.aero/ae-home/introduction-to-airspace/
Vertical Navigation (VNAV)	An auto flight function which directs the vertical movement of an aircraft (i.e. gains or losses in its altitude).
WebTAG	WebTAG (Web-based Transport Analysis Guidance) is the Government's (DfT's) transport appraisal guidance and toolkit.