London Airspace Consultation
Appendix B
Glossary

Airports Commission	A commission set up by the Government to look into options for the development of runway infrastructure in the South East
Altitude	The height in feet, above mean sea level. Due to variations in terrain, air traffic control measure altitudes as above mean sea level rather than above the ground. If you are interested in the height of aircraft above a particular location to assess potential noise impact, then local elevation should be taken into account when considering aircraft heights; for example an aircraft at 8,000ft above mean sea level would be 7,500ft above ground level if the ground elevation is 500ft. All altitudes in the consultation document are defined as above mean sea level
AMSL	Above mean sea level
AONB	Area of Outstanding Natural Beauty
ATC	Air traffic control
ATC intervention	This is when ATC instruct aircraft off their planned route, for example, in order to provide a short cut, they may be instructed to fly directly to a point rather than following the path of the published route
ATS Licence	The Air Traffic Services licence to provide air traffic control services for UK 'en route' airspace issued by the government
CAA	Civil Aviation Authority
Capacity	A term used to describe how many aircraft can be accommodated within an airspace area without compromising safety or generating excessive delay
CAS	See Controlled airspace
Centreline	The nominal track for a published route (see Route)
City pair	The departure and arrival airport for a flight. The city pair generally dictates the flight path to be taken – ie there are standard flight paths for each city pair
CO_2	Carbon dioxide
Concentration	Refers to a density of aircraft flight paths over a given location; generally refers to high density where tracks are not spread out; this is the opposite of Dispersal
Consultation swathe	This is the broad area within which we will need to position a route
Continuous climb	A climb that is constant, without periods of level flight – referred to as steps
Continuous descent	A descent that is constant, without periods of level flight – referred to as steps

Controlled airspace	Generic term for the airspace in which an air traffic control service is provided as standard; note that there are different sub classifications of airspace that define the particular air traffic services available in defined classes of controlled airspace Usually abbreviated to CAS
Conventional navigation	The historic navigation standard where aircraft fly with reference to ground based navigation aids
Conventional routes	Routes defined to the conventional navigation standard
Davies Commission	See Airports Commission
Departure Interval	The time gap required between successive departures taking off from the same runway
Dispersal	Refers to the density of aircraft flight paths over a given location; generally refers to low density – tracks that are spread out; this is the opposite of Concentration
Easterly operation	When an runway is operating such that aircraft are taking off and landing in a easterly direction; see Runway 09 and Runway 08 respectively for definition of easterly operations at London City and Gatwick airports
Enabled fuel benefits	NATS' measure for improved fuel efficiency; it relates to a definition of the planned fuel, or trip fuel, which aircraft have to carry for a journey – see Part G for details
FAS	See Future Airspace Strategy
Final approach path	The final part of a flight path that is lined up with the runway; aircraft usually join final approach between 8nm and 15nm from the runway
Flight paths	The tracks flown by aircraft when following a route, or when being directed by air traffic control
Flight plan	The flight path that an aircraft has to carry fuel for, which covers the whole route, not including any changes to the flight path made tactically by air traffic control – which may be either to shorten the flight path when it is not busy or lengthen the flight path when there is a queue to land (such as time spent in the hold)
ft	Feet, the standard measure for vertical distances used in air traffic control
Fuel uplift	The amount of fuel that aircraft have to carry on a journey, this includes the fuel for the flight plan, contingency fuel for airborne delay and contingency for emergencies
Future Airspace Strategy	The CAA's blueprint for modernising the UK's airspace. The CAA explains the background to FAS here: www.caa.co.uk/default.aspx?catid=2408
GA	See General Aviation
GAL	Gatwick Airport Limited

General Aviation	All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire. General aviation flights range from gliders and powered parachutes to corporate jet flights
Holds/Holding Stacks	An airspace structure where aircraft circle above one another at 1,000ft intervals when queuing to land
Intermediate airspace	Airspace with routes at altitudes between 4,000ft and 7,000ft in which NATS has accountability for safe and efficient air traffic services but in which airports may also have local requirements (see Part A paragraph 2.3 for details)
LAC	London Airspace Consultation
LAMP	London Airspace Management Programme
Low altitude airspace	Airspace in the vicinity of the airport containing arrival and departure routes below 4,000ft. Airports have the primary accountability for this airspace, as its design and operation is largely dictated by local noise requirements, airport capacity and efficiency
MOD	Ministry of Defence
NATS	The UK's licenced air traffic service provider for the en route airspace that connects our airports with each other, and with the airspace of neighbouring states
Nautical Mile	Aviation measures distances in nautical miles. One nautical mile (nm) is 1,852 metres. One road mile ('statute mile') is 1,609 metres, making a nautical mile about 15% longer than a statute mile.
Network airspace	En route airspace above 7,000ft in which NATS has accountability for safe and efficient air traffic services for aircraft travelling between the UK airports and the airspace of neighbouring states (see Part A paragraph 2.3)
nm	See Nautical Mile
Noise contours	The depiction of noise across a period of the day as a series of contours around the airport; major airports annually publish the noise contours for the 'daytime' period of 0700-2300; these are referred to as the Leq(16 hours) noise contours
Noise footprints	The depiction of noise from a single aircraft as a 'footprint' around the airport
NPR	Noise Preferential Route
NPR Swathe	An area defined around an NPR in which aircraft below 4,000ft are required to stay within. Today's NPR Swathes start narrow at the runway and widen to a maximum of 3km. Their length is based on the distance it would take a slow climbing aircraft to reach 4,000ft. NPRs for future 'PBN' routes are likely to be narrower and shorter to represent improved navigation accuracy and climb performance of modern aircraft
p/a	Per annum (per year)

PBN	See Performance Based Navigation

Performance Based Navigation	Referred to as PBN; a generic term for modern standards for aircraft navigation capabilities (as opposed to 'conventional' navigation standards). See www.eurocontrol.int/navigation/pbn for details
Point Merge	A route system for organising arrivals into an efficient landing 'sequence'
PRNAV	Precision 'RNAV', otherwise referred to as 'RNAV1' (both these terms are defined in this glossary)
Radius-to-fix turn	A turn on a PBN route where all aircraft fly a turn with a fixed radius, meaning that all aircraft flight paths will be concentrated on the published centreline of the turn. Other kinds of turn generally result in more variation as a consequence of aircraft flying at different speeds and therefore flying turns with a bigger or smaller radius (the faster the aircraft the wider the turn).
Requested flight level	The requested cruising level for a flight. This is dependent on factors such as the aircraft type, its weight and the route being flown
Respite route	Additional routes established to spread traffic in a predictable way, so that areas beneath the original track get predictable periods of respite
RNAV	Short for aRea NAVigation. This is a generic term for a particular specification of Performance Based Navigation
RNAV1	See RNAV. The suffix '1' denotes a requirement that aircraft can navigate to with 1nm of the centreline of the route 95% or more of the time
RNAV1 Transition	The part of an arrival route, defined to the RNAV1 standard, between the last part of the hold (or Point Merge structure) and the final approach path to the runway
RNP1	Required Navigation Performance 1. An advanced navigation specification under the PBN umbrella. The suffix '1' denotes a requirement that aircraft can navigate to with 1nm of the centreline 95% or more of the time
Route	Published routes that aircraft plan to follow. These have a nominal centreline that gives an indication of where aircraft on the route would be expected to fly; however, aircraft will fly routes and route segments with varying degrees of accuracy based on a range of operational factors such as the weather, ATC intervention, and technical factors such as the PBN specification
Route system or route structure	The network of routes linking airports to one another and to the airspace of neighbouring states

Runway 08 (London Gatwick)	The name given to the main runway at Gatwick when operating in an 'easterly' direction (ie taking off and landing on the easterly heading of 080º)
Runway 09 (London City)	The name given to the runway at London City when operating in an 'easterly' direction (ie taking off and landing on the easterly heading of 090º)
Runway 26 (London Gatwick)	The name given to the main runway at Gatwick when operating in a 'westerly' direction (ie taking off and landing on the westerly heading of 260º)
Runway 27 (London City)	The name given to the runway at London City when operating in a 'westerly' direction (ie taking off and landing on the westerly heading of 270º)
Sequence	The order of arrivals in a queue of airborne aircraft waiting to land
SID	See Standard Instrument Departure
Simulation modelling	Computer based analysis where the air traffic is 'flown' through a virtual airspace system; used to assess the effects of changing airspace and routes on the efficiency of air traffic flows
Stacks / Stack holds	See Holds
Standard Arrival Route	The published routes for arriving traffic. In today's system these bring aircraft from the route network to the holds, from where they follow ATC instructions rather than a published route. Under PBN the published arrival route would go all the way to the runway
Standard Instrument Departure	Usually abbreviated to SID; this is a route for departures to follow straight after take-off as specified in the UK's Aeronautical Information Publication – see www.ais.org.uk
STAR	See Standard Arrival Route
Statute mile	A standard mile as used in normal day to day situations (eg road signs) but not for air traffic where nautical miles are used
Stepped climb	A climb that is interrupted by periods of level flight required to keep the aircraft separated from another route in the airspace above
Stepped descent	A descent that is interrupted by periods of level flight required to keep the aircraft separated from another route in the airspace below
Systemisation	The process of reducing the need for human intervention in the air traffic control system, primarily by utilising improved navigation capabilities to develop a network of routes that are safely separated from one another so that aircraft are guaranteed to be kept apart without the need for air traffic control to intervene
t	Metric Tonne (1t=1,000kg)
TA	See Transition Altitude

Tactical methods	Air traffic control methods that involve air traffic controllers directing aircraft off the established routes structure for reasons of safety or efficiency
Terminal airspace	An aviation term to describe a designated area of controlled airspace surrounding a major airport or cluster of airports where there is a high volume of traffic; a large part of the airspace above London and the South East is defined as terminal airspace (or Terminal Manoeuvring Area – TMA). This is the airspace that contains all the arrival and departure routes for Heathrow, Gatwick, Stansted, Luton and London City from around 2,000ft-3,000ft up to approximately 20,000ft
Transition (referring to a route)	The part of an arrival flight path between the last hold (or Point Merge structure) and the final approach path to the runway
Transition Altitude	The altitude at which aircraft switch their altimeter settings from the local pressure setting to the standard international pressure setting; for the purposes of airspace design the transition altitude represents a cap on the maximum altitude that a departure route can be defined to; it is currently 6,000ft across the UK but plans to raise it higher across Europe are being developed – see Part A for details.
Uncontrolled Airspace	Generic term for the airspace in which no air traffic control service is provided as standard
Uplift	See fuel uplift
Vectored	The application of 'vectoring'
Vectoring	An air traffic control method that involves directing aircraft off the established route structure for reasons of safety or efficiency.
Westerly operation	When an runway is operating such that aircraft are taking off and landing in a westerly direction; see Runway 27 and Runway 26 respectively for definition of westerly operations at London City and Gatwick airports