

Appendix 1F

Glossary

Term	Definition
Ambient noise	Usually expressed using the $L_{Aeq,T}$ unit, commonly understood to include all sound sources present at any particular site, regardless of whether they are actually defined as noise.
Apron	The airport apron is the area of an airport where aircraft are parked, unloaded or loaded, refuelled, or boarded.
A-weighting	The sensitivity of the ear is frequency dependent. Sound level meters are fitted with a weighting network which approximates to this response and allows sound levels to be expressed as an overall single figure value, in dB(A).
Background noise	This is the steady noise attributable to less prominent and mostly distant sound sources above which identifiable specific noise sources intrude. It is usually expressed using the LA90 unit.
Baseline	A study of existing environmental conditions
Biodiversity	The concept of a variety in all species of plants and animals through which nature finds its balance.
Carbon Budget	The UK Carbon Budget is the total quantity of greenhouse gas emissions permitted in the United Kingdom over a specified period.
Carbon dioxide equivalent	A measure used to compare the emissions from various greenhouse gases based on their global warming potential relative to that of carbon dioxide.
Carbon emission	The release of carbon into the atmosphere.
Climate change mitigation	Action to reduce the causes of climate change (e.g. emissions of greenhouse gases), as well as reducing future risks associated with climate change.
Committee on Climate Change	An independent advisory body, established under section 32 of the Climate Change Act 2008, tasked with helping the UK Government set and meet carbon budgets and adapt to climate change.
Cumulative Effect	The combined effects of foreseeable human induced changes within a specific geographical area over a certain period of time. Effects can be both direct and indirect.
dB / Decibel	The unit used to describe the magnitude of sound is the decibel (dB) and the quantity measured is the sound pressure level. The decibel scale is logarithmic and it ascribes equal values to proportional changes in sound pressure, which is a characteristic of the ear. Use of a logarithmic scale has the added advantage that it compresses the very wide range of sound pressures to which the ear may typically be exposed to a more manageable range of numbers. The threshold of hearing occurs at approximately 0 dB (which corresponds to a reference sound pressure of 2×10^{-5} Pascals) and the threshold of pain is around 120 dB. The sound energy radiated by a source can also be expressed in decibels. The sound power is a measure of the total sound energy radiated by a source per second, in watts. The sound power level, L_w is expressed in decibels, referenced to 10-12 watts.
Effect	A temporary or permanent consequence of a singular or collective impact associated with the proposal.

Term	Definition
EIA regulations	Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI No 571)
Emissions scenario	Scenarios of how greenhouse gas emissions may vary in future. These are used by scientists to generate climate change projections.
Environment	Our physical surroundings including air, water and land.
Environmental impact assessment	An assessment undertaken to determine the potential impacts of a proposed development on various elements of the environment, such as on air quality and ecology and social issues such as socio-economics and transport.
Environmental statement	The report of the Environmental Impact Assessment of a proposed development.
Extreme weather event	Unusual, severe or unseasonal weather; or weather at the extremes of the range of weather seen in the past.
Frequency (Hz)	Frequency is analogous to musical pitch. It depends upon the rate of vibration of the air molecules that transmit the sound and is measured as the number of cycles per second or Hertz (Hz). The human ear is sensitive to sound in the range 20 Hz to 20,000 Hz (20 kHz). For acoustic engineering purposes, the frequency range is normally divided up into discrete bands. The most commonly used bands are octave bands, in which the upper limiting frequency for any band is twice the lower limiting frequency, and one-third octave bands, in which each octave band is divided into three. The bands are described by their centre frequency value and the ranges which are typically used for building acoustics purposes are 63 Hz to 4 kHz (octave bands) and 100 Hz to 3150 Hz (one-third octave bands).
Future baseline	The situation that would occur if the proposed development that is the subject of the Environmental Impact Assessment does not proceed. The predicted impacts of the development are compared against this theoretical scenario.
Greenhouse Gas	A gas such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour that contributes to the greenhouse effect by absorbing infrared radiation.
Groundwater	Water held underground in the soil or in pores and crevices in rock.
Health	A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.
Health impact assessment	A means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques.
Hypertension	Abnormally high blood pressure.
Impact	Something which temporarily or permanently causes a change to the environmental baseline, whether adverse or beneficial, as a result of the proposals.
Indices of multiple deprivation	A UK government qualitative study of deprived areas in English local counties. Commonly known as the IMD, is the official measure of relative deprivation for small areas in England.
Indirect impacts	Impacts on the environment, which are not a direct result of the development but are often produced away from it or as a result of a complex pathway.
Inter-project effects assessment	An assessment of how the environmental effects resulting from the Proposed Development could combine with the same topic-related effects generated by other proposed or committed developments to affect a common receptor. For example, noise generated by the construction of the Proposed Development and that generated from another construction site nearby could affect the same residential property receptor.

Term	Definition
LA90	Level exceeded 90% of the time (background noise).
LAeq,T	Equivalent continuous A-weighted sound pressure level.
LAm_{ax,T}	The maximum A-weighted sound pressure level, normally associated with a time weighting, F (fast), or S (slow), such as LAF,max or LAS,max.
Lowest observable adverse effect level	This is one of three observed effect level definitions to the assessment of noise in England, in order to identify and rate noise impact on the community from any development. It is the level above which adverse effects on health and quality of life can be detected.
Lower super output area	Geographic hierarchy designed to improve the reporting of small area statistics in England and Wales.
Land use	The primary use of the land, including both rural and urban activities.
MAGIC	A website that provides geographic information about the natural environment from across government.
Methodology	The specific approach and techniques used for a given study.
Mitigation	Any process, activity or entity designed to avoid, reduce, or remedy adverse environmental effects likely to be caused by a development project.
N60 & N70	Nx contours define ground receptors exposed to a number of events with a maximum noise level of x dB L _{ASmax} or greater.
No observed effect level	This is one of three observed effect level definitions to the assessment of noise in England, in order to identify and rate noise impact on the community from any development. It is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.
Non-technical summary	The 'executive summary' of an Environmental Statement prepared in non-technical language so that it can be read by the layperson.
Nx	Nx or Number Above is the total number of aircraft operations that exceed a specified sound level threshold. For example, N65 is the count of departure and arrival events in excess of 65dB L _{AMAX} .
Operational phase	Standard operation after commissioning.
Parent permission	The planning permission granted in 2014 for expansion of the airport with a cap of 18 million passengers per annum, which provides the overall baseline and context for subsequent planning consents, and this current application.
Paris Agreement	An agreement within the United Nations Framework Convention on Climate Change (UNFCCC) that sets out a global action plan to mitigate greenhouse gas emissions and limiting global warming to well below 2°C, as well as strengthening the ability of countries to deal with the impacts of climate change.
Particulate matter	Particulate matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets that get into the air. Once inhaled, these particles can affect the heart and lungs and cause serious health effects.
Peak Day Air Transport Movements	The busiest day in terms of the number of Air Traffic Movements
Potential receptors	Locations used by people at which there is an environmental or social change that could affect a health outcome.

Term	Definition
Proposed scheme	The proposed expansion of Luton Airport beyond the permitted passenger cap of 18 million passengers per annum to 19 million passengers per annum through a planning application to Luton Borough Council.
Ramsar site	A designation of wetland sites of international importance under the Ramsar Convention.
Rating level, $L_{A,r,Tr}$	The specific sound level plus any adjustment for the characteristic features of the sound.
Receptors	A component of the natural or man-made environment such as water or a building that is affected by an impact.
Residual impacts	Effects remaining after mitigation measures have been implemented.
Scheduled Monument	In the United Kingdom, a scheduled monument is a nationally important archaeological site or historic building, given protection against unauthorised change.
Scoping	An early stage within the Environmental Impact Assessment Process where the significance of environmental issue and scope of the environmental studies are determined.
Significant effect	Significant effects are those identified as 'Major' within the significance evaluation matrix (contained within Chapter 4: Approach to preparing the Environmental Statement).
Significant observed adverse effect level	This is one of three observed effect level definitions to the assessment of noise in England, in order to identify and rate noise impact on the community from any development. It is the level above which significant adverse effects on health and quality of life occur.
Sound	This is a physical vibration in the air, propagating away from a source, whether heard or not.
Sound power levels (L_w)	Sound power levels (L_w) are used to describe the sound output of a sound source.
Spatial scope	The area over which changes to the environment are predicted to occur as a consequence of a Proposed Scheme.
Surface water	Water found on the surface of the Earth (not underground or in the atmosphere), for example in rivers, seas, lakes and reservoirs.
Taxiing	Taxiing is the slow movement of an aircraft on the ground, under its own power, before take-off or after landing.
Temporal scope	The time period over which changes to the environment and the resultant effects are predicted to occur.
Topic	The environment that could be affected by the proposed development.
Traffic flows	The interactions between travellers and infrastructure.
Transboundary effects	Effects that would affect the environment in another state within the European Economic Area (EEA)
Unacceptable Adverse Effect Level	The level above which extensive and regular changes in behaviour and/or an inability to mitigate the effect of noise leading to psychological stress or physical effects occurs.
Vibration	Vibration is an oscillatory motion. The magnitude of vibration can be defined in terms of displacement, i.e. how far from the equilibrium something moves, velocity (how fast something moves), or acceleration (the rate of change of the velocity).
Visual Effect	The change in the appearance of the townscape as a result of the development. This can be positive or negative.

Term	Definition
Wellbeing	A state in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her or his community.
92-Day Peak Period Air Transport Movements	The 92-day period within which the highest number of Air Transport Movements occurs.