

Proposed Noise Change Impacts in Environmental Assessment

Why are Heathrow using Road Noise Impacts to assess Aviation Impacts?

Heathrow Expansion

PRELIMINARY ENVIRONMENTAL INFORMATION REPORT:

Chapter 17: Noise and vibration



Table 17.15: Noise change categories

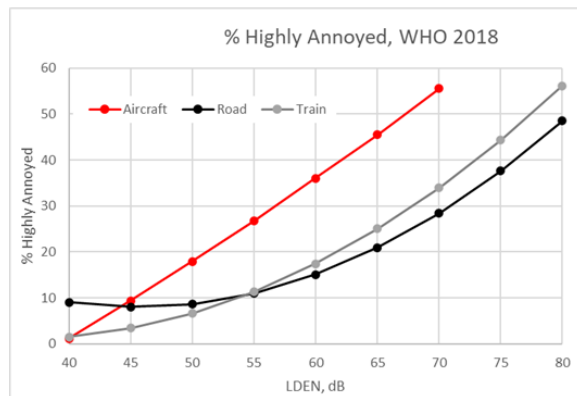
Actual Aviation Impacts

Noise change category	Aircraft and ground noise	Road noise	Implied flight Increase	Real Change Impact
Negligible	<1 dB	<1 dB	Up to 25%	Low - Medium
Low	1 - 2 dB	1 - 2 dB	25% to 100% (3dB = x2)	High
Medium	3 - 5 dB	3 - 4 dB	100% to ~400% (6dB = x4)	Very High
High	6 - 9 dB	5 - 10 dB	400% to ~1000%	Extremely High
Very High	>9 dB	>10 dB	>~1000% (10dB = x10)	Extremely High



This assessment is based on road noise

Categories of change need to be adjusted



Technical Differences

Road Noise is more continuous so average LAeq's (average sound energy) are more like a loudness measure and changes can have less impact

While for Aviation noise LAeq is made up of pulses, a 3dB change requires twice as many pulses of the same magnitude

Plane noise is more annoying due to pulse nature, unknown timing, unknown final magnitude, unknown length