

Category 1 Standard

S1521 Safety Decision Making

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MAYOR OF LONDON



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1 Purpose

- 1.1 The purpose of this Standard is to specify the requirements to ensure that safety decisions are made in a consistent and transparent manner and demonstrate that safety risks have been reduced to a level which is as low as reasonably practicable (ALARP).
- 1.2 This requirement puts into effect the LU company policy on safety decision making.

2 Scope

- 2.1 This Standard applies to LU and its suppliers, insofar as the consideration of safety relates to risks associated with LU's operations.

3 Requirements

3.1 Tolerability of Risk

- 3.1.1 Specific requirements that carry statutory force shall be complied with, unless exemptions have been granted by the appropriate enforcing authority.
- 3.1.2 Measures shall be implemented to reduce risk, or the activity or process stopped, if the overall risk of fatality is assessed as intolerable i.e. to be greater than:
- 1 in 1000 per year for an individual worker, or,
 - 1 in 10,000 per year for an individual customer or member of the public.
- 3.1.3 Below these levels of risk, measures shall be implemented to reduce all risk to a level which is as low as reasonably practicable (ALARP).

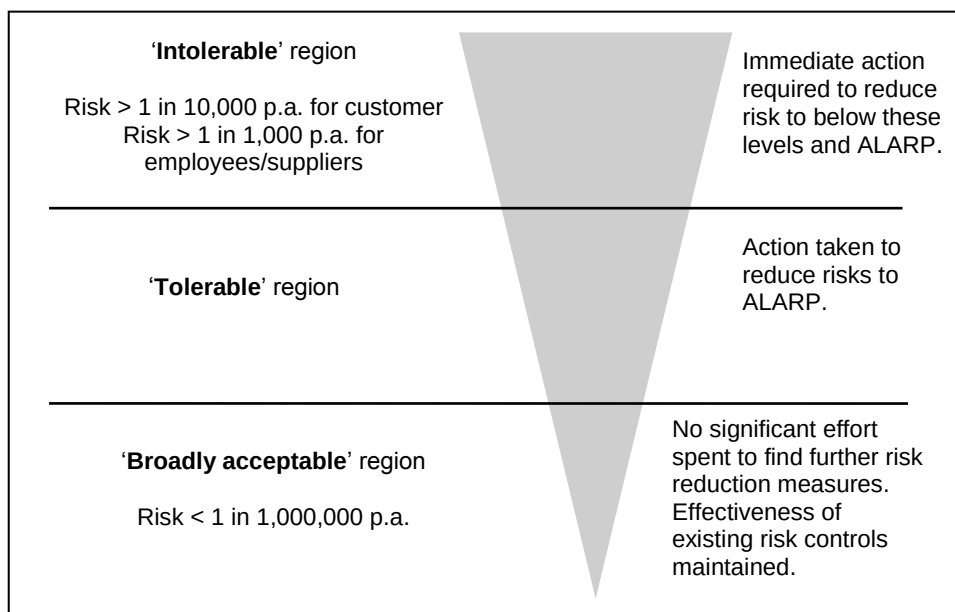


Figure 1
Tolerability of Risk

3.2 Best Practice and Modern Standards

- 3.2.1 In the design of new assets and operations, and in the review of the safety of existing assets and operations, best practice and modern standards applicable to the railway industry shall be identified and recorded.
- 3.2.2 Best Practice shall be seen as encompassing Industry and Regulatory Codes (such as the HSE Railway Safety Principles and Guidance, ACOPs, and Regulatory Guides) as well as practices adopted by similar organisations.
- 3.2.3 Such best practice and/or modern standards shall be considered reasonably practicable to implement, unless it can be reasonably argued that one or more of the following conditions are applicable:
- a) It can be demonstrated that it is very difficult or costly when back fitted to assets or operations designed to previous standards.
 - b) The nature of the operations being undertaken have significant differences to those of the benchmarking organisations, such that either:
 - There are peculiar difficulties in applying the practice and/or standard within LU, or
 - The operations introduce inherently lower risks, or
 - The operations include alternative means of controlling the risks.
 - c) The standard has clearly been set with future aspiration in mind rather than what is practicable today.
- 3.2.4 Where
- a) one or more of the above conditions is argued as applicable, or
 - b) there is considered to be a case for going beyond identified good practice, or
 - c) no relevant good practice has been identified,

further analysis shall be applied to demonstrate which, if any, risk reduction measures should be implemented to reduce risks to a level which is as low as reasonably practicable. Risk reduction measures include Best Practice and Modern Standards or any alternative measures where a Safety Cost Benefit Analysis shows Best Practice and Modern Standards not to be reasonably practicable. Where it is likely that a Quantitative Safety Cost Benefit Analysis can inform the qualitative judgement, quantitative cost benefit analysis shall be used.

3.3 Quantitative Safety Cost Benefit Analysis

- 3.3.1 Quantitative Safety Cost Benefit Analysis shall only be undertaken where 3.2.4 applies.
- 3.3.2 No allowance shall be included in the safety cost benefit analysis of wider customer disbenefits, other than those relating to their health and safety. However, the analysis of the wider effects of the measure on service may be used to inform considerations of societal concern or the business case for implementing a measure not justified on safety grounds (see BCDM).
- 3.3.3 The cost of implementing the risk-reduction measure shall consider the net financial effect, calculated in accordance with the Business Case Development Manual (BCDM).
- 3.3.4 The safety benefit shall be assessed by considering the net change in risk (fatalities and injuries) arising from introduction of the proposed risk reduction measure. The