

## Glossary

This is a list to define some of the more crucial words to help the reader to fully understand their meaning throughout this thesis. Source ‘\*’ is from BS 8444 (1996), source ‘#’ is from Bell (1989), source ‘\*\*’ is from Offshore Installations Guidelines (HSE, 1992b), and source ‘~’ is from the AH001 Safety Case (AHL, 1996a). The words and definitions are:

<i>Word</i>	<i>Source</i>	<i>Definition</i>
<b>Acceptable Risk</b>	~	That level of risk that is sufficiently low that we need not necessarily take further action to reduce it. Note, however, that if there are simple and economical means reducing the risk they should be implemented.
<b>Accident</b>	#	An undesired consequence, often associated with an unwanted transfer of energy due to lack or failure of barriers and/or controls, inflicting injury upon persons or damage to property or process.
<b>ALARP</b>	~	As Low As Reasonably Practicable. This denotes the point at which further steps to reduce risks incur costs that are grossly disproportionate with benefits gained.
<b>Benefit</b>	~	The reduction in probable loss of life achieved by a given enhancement.
<b>Event</b>	#	An internal or external occurrence involving equipment performance or human action that causes a system upset.
<b>Failure</b>	#	The inability of a system, sub-system, or component to perform its required function.
<b>Hazard</b>	*	A source of potential harm or a situation with potential for harm (in terms of human injury, damage to property, damage to the environment, or combination thereof)
<b>Individual Risk</b>	~	The frequency at which an individual may expect to sustain a given level of harm from the realisation of specified hazards. (For the purposes of this standard the specified harm is fatality.)

<b>Major Accident Hazard</b>	**	<p>An occurrence resulting from uncontrolled developments in the course of an industrial activity leading to serious danger to persons or the environment. A major accident hazard is synonymous with Major Hazard, a term used in the Safety Case regulations where it is defused as one which meets one or more of the following criteria:</p> <p><i>i) A fire, explosion or the release of a dangerous substance involving death or serious personal injury to persons on the installation or engaged in an activity on or in connection with it.</i></p> <p><i>ii) Any event involving major damage to the structure of the installation or plant affixed thereto or any loss in the stability of the installation.</i></p> <p><i>iii) The collision of a helicopter with the installation.</i></p> <p><i>iv) The failure of life support systems for diving operations in connection with the installation, the detachment of a diving bell used for such operations or the trapping of a diver in a diving bell or other sub-sea chamber used for such operations.</i></p> <p><i>v) Any other event arising from a work activity involving death or serious personal injury to five or more persons on the installation or engaged in an activity on or in connection with it</i></p>
<b>Management System</b>	**	the organisation and arrangements established by the duty holder for managing his undertaking
<b>Quantitative risk analysis</b>	**	the identification of hazards and the evaluation of the extent of risk arising therefrom incorporating calculations based upon the frequency and magnitude of hazardous events
<b>Residual Risk</b>	~	The level of risk that remains after all proposed improvements to the facility have been made.
<b>Risk</b>	*	Combination of the frequency, or probability, of occurrence and the consequence of a specified hazardous event
<b>Risk analysis</b>	*	Systematic use of available information to identify hazards and to estimate the risk to individuals or populations, property and the environment
<b>Risk assessment</b>	*	Overall process of risk analysis and risk evaluation

<b>Risk control</b>	*	Process of decision making for managing and/or reducing risk; its implementation, enforcement and re-evaluation from time to time, using the results of risk assessment as one input
<b>Risk estimation</b>	*	Process used to produce a measure of the level of risks being analysed. Risk estimation consists of the following steps: frequency analysis, consequence analysis and their integration
<b>Risk evaluation</b>	*	Process in which judgements are made on the tolerability of the risk on the basis of risk analysis and taking into account factors such as socio-economic and environmental aspects.
<b>Risk management</b>	*	Systematic application of management policies, procedures and practices to the tasks of analysing, evaluating, and controlling risk.
<b>Tolerable risk</b>	~	That level of risk that we are prepared to accept to secure certain benefits, provided that it is properly controlled. When risks are deemed to be tolerable, they must be demonstrated to be ALARP.
<b>Uncertainty</b>	#	A measure of the limits of knowledge in a technical area, expressed as a distribution of probabilities around a point estimate. Related closely to 'Risk'.