

Risk assessment – a simple standard

Risk assessment is a legally required system for managing workplace health and safety. The law also requires prompt consultation with union health and safety representatives.

In risk assessment, hazard is defined as the potential to cause harm, and risk as the likelihood of that harm occurring. Risk assessment involves deciding whether harm is so likely to occur that preventive action must be taken.

The problem with risk assessment is that judging risk has an element of subjectivity. A bad judgement of a risk will result in inappropriate preventive action, or none.

Another key criticism is that risk assessment does not insist on elimination of hazards, but only on controls.

Basic legal obligation

The Management of Health and Safety at Work Regulations (Management Regulations) require employers to identify all hazards at their workplace, to quantify the risk to employees and others and to systematically eliminate or control hazards. Employers with five or more employees must record significant findings. The assessment must take everyone into account, not forgetting cleaners, security staff, contractors and the public. It must be reviewed periodically, or if an incident or illness occurs, or the job or worker changes.

Minimising subjectivity with BS 8800

Because of the problem of subjectivity, it is useful to have an assessment system which is as clear and logical as possible. A widely used method is laid down in the British Standard BS 8800, which deals with workplace safety management including risk assessment. The usefulness

of BS 8800 lies in its method for triggering control action based on risk assessment. A major failing is that it treats consultation with recognised safety representatives as advisable, when it is a legal obligation. It is also too expensive.

The BS 8800 method asks, 'what harm can be caused by exposure to an occupational hazard and what is the likelihood of that harm occurring?' The standard goes on to examine how the likelihood of harm can be eliminated or reduced to insignificance.

Harm/likelihood

Once a hazard exposure is spotted, you assess the maximum harm possible from the hazard, and the likelihood of that harm. These two factors are used to produce an estimation of risk via the grid (or matrix) in Table 1.

Harm

Three categories of harm are used in BS 8800:

- ▲ **Slightly harmful:** Harm that is of a temporary nature, e.g. headache or muscle strain that dissipates.
- ▲ **Harmful:** Harm that results in permanent minor disability, e.g. slight deafness, small reductions in lung function, minor back problems.
- ▲ **Extremely harmful:** Premature death or permanent major disability. E.g. chronic exposure to a workplace stressor (noise, work overload, bullying behaviour) could result in premature death from pulmonary embolism and thus be *extremely harmful*.

Likelihood

You then assess the likelihood of that harm occurring. Three categories of likelihood that harm will occur are used in BS 8800:

- ▲ **Highly unlikely**
- ▲ **Unlikely**
- ▲ **Likely**

If there is a record of such injuries happening then it becomes difficult to ascribe the harm to any category other than 'likely'. If you cannot place likelihood into the 'likely' category, then start with 'highly unlikely' and then consider other factors that might push it into the 'unlikely' category.

E.g. if someone's job involves traversing stairs, the maximum harm they could receive is that they are killed in a fall. The likelihood of being killed by such a fall is *highly unlikely*. Factors that may increase the likelihood might be poor lighting, poorly maintained steps or nosings, an absence of banisters, wet surfaces or even frequency of exposure if the job involves many or constant stair journeys.

Risk control plan

Now you can use the risk estimate to trigger the appropriate level of controls, as in Table 2. For example, these are the actions a Health and Safety Executive inspector could take at each level:

- ▲ **trivial** – monitor and review in the light of any changes to the task or workers.
- ▲ **tolerable** – advise minimal improvements and monitor

Table 1: A simple risk-level estimator

	Slightly harmful	Harmful	Extremely harmful
Highly unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Table 2: A simple risk-based control plan

Risk level	Action and time scale
Trivial	No action nor documentary records needed – but good practice to record the assessment
Tolerable	Improvement not mandatory, but record and monitoring required to ensure controls are maintained. Go for cheap improvements where possible.
Moderate	Aim to reduce risk but costs of prevention may be limited. Measures should be tied to a timetable
Substantial	Where the risk involves work in progress urgent action should be taken otherwise work should not start until the risk has been reduced. Considerable resources may have to be allocated.
Intolerable	Work should not be started or continued until the risk has been reduced. If it is not possible to reduce risk even with unlimited resources work has to remain prohibited.

- ▲ **moderate** – request improvements in the form of a 'minded to prosecute' letter
- ▲ **substantial** – issue an improvement notice
- ▲ **intolerable** – issue a prohibition notice

The legally required approach to control measures is laid down by Regulation 4 of the Management Regulations:

- 1) if possible avoid a risk altogether, e.g. do the work in a different way, taking care not to introduce new hazards, and if the hazard cannot be eliminated then
- 2) combat risks at source, rather than taking palliative measures. So, if the steps are slippery, treating or replacing them is better than displaying a warning sign
- 3) adapt work to the requirements of the individual by consulting those who will be affected
- 4) take advantage of technical progress
- 5) implement risk prevention measures as part of a coherent policy. This will ensure that those risks that cannot

- be prevented or avoided altogether will be progressively reduced
- 6) give priority to those measures which protect the whole workplace and everyone who works there
- 7) ensure that workers, whether employees or self-employed, understand what they must do through information, instruction, supervision and training
- 8) Develop a health and safety culture: this means the avoidance, prevention

and reduction of risks at work are accepted as part of the organisation's approach to all its activities. It should be actively pursued at all levels of the organisation, from junior to senior management.

Putting it all together: Ten steps to risk assessment

The steps in risk assessing a hazard arising from a work task are:

- 1) Identify the hazard(s) associated with the work task
- 2) Identify who is exposed and how they can be harmed
- 3) Estimate the likelihood of harm occurring.
- 4) Use the risk level estimator to draw up a control plan
- 5) Identify how you are currently tackling exposure to the hazard
- 6) Identify additional things to do that reduce the risk to tolerable
- 7) Allocate responsibility for implementing and monitoring
- 8) Set the time-scale for making changes
- 9) Set a review date for checking effectiveness and improving controls where new methods emerge
- 10) Record all this information – this is your risk assessment.

Find out more

Management of health and safety at work: Management of Health and Safety at Work Regulations 1999: Approved Code of Practice and guidance. HSE code L21. £8.00. **5 steps to risk assessment.** HSE. INDG163. Free. Both from HSE Books, 01787 881165, www.hsebooks.co.uk

British Standard BS 8800. Guide to Occupational health and safety management systems. £88.00 + p&p. BSI. Tel: 01344 861 666

LHC factsheet: **Management of Health and Safety at Work Regulations**

Factsheets online www.lhc.org.uk London advice 020 7794 5999



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