



British Occupational
Hygiene Society

The Chartered Society for Worker Health Protection

ALARP – What is it and how do we achieve it?

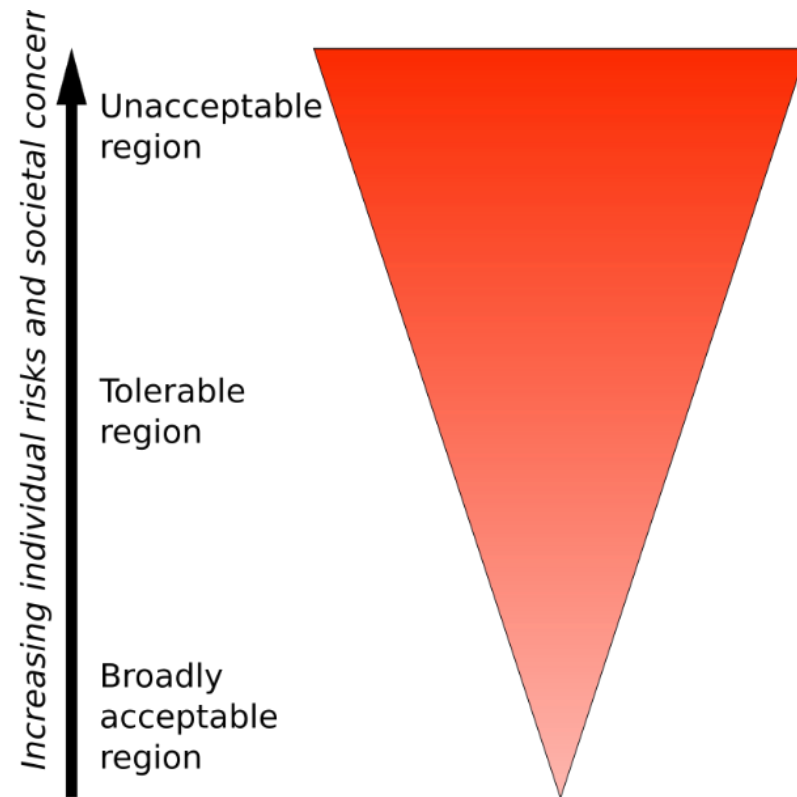
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“ALARP” ... What? Why?

- What does an employer need to do to avoid employees and others from being harmed?
- How much cost and inconvenience is expected of a business?
- Is it just a question about the potential harm to the individual?
- How “careful” is “careful enough”?

Edwards v National Coal Board (1949)

"Reasonably practicable" is a narrower term than "physically possible" and seems to me to imply that a computation must be made by the owner, in which the quantum of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) is placed in the other; and that if it be shown that there is a gross disproportion between them - the risk being insignificant in relation to the sacrifice - the defendants discharge the onus on them. Moreover, this computation falls to be made by the owner at a point of time anterior to the accident.



The Calculation

The **sacrifice** (normally expressed in monetary terms) is that needed to implement additional measures to reduce risks.

Benefits gained by duty holders (e.g. reduced plant replacement costs) should be offset against costs.

The **comparison** is between the net sacrifice and the benefits of risk reduction (lives saved, reduced costs of the emergency services etc). The assessment needs to be proportionate (see sector specific guidance for further information on proportionality).

For a measure to be not reasonably practicable the degree of disproportion between costs and benefits must be gross ie the **test of gross disproportion**.

Grossly Disproportionate

The HSE ALARP guidelines state that in all cases 'the disproportion must always be gross' but do not define what is gross. However, it suggests an examination of what was done in comparable circumstances may be useful in coming to a view.

Both **individual risk** and **societal risk** should be considered when applying the test of gross disproportion.

Good, better and best

Relaxation of control measures will be exceptional, eg when new evidence shows that a substance is far less toxic than originally thought or when there is a significant reduction of the number of people at risk.

HSE Inspectors will ensure that **relevant good practice** is in place. This can be found in ACOPs, HSE guidance, recognised standards, and industry practice appropriate to the duty holders' activities. This is the minimum compliance standard.

Good Practice and New Technology

Where good practice fully meets the ALARP requirements, the duty-holder is relieved of the need (*but not the legal duty*) to take explicit account of individual risk, costs, technical feasibility and the acceptability of residual risk, since these will have been considered when the good practice was established. The duty holder has to demonstrate that the good practice is relevant and up-to-date.

There is a continuing duty for duty holders to keep risks and possible risk reduction measures under review to take account of changing circumstances, advances in technology, new knowledge and information. Good practice may change over time; **new technology** may make a higher standard reasonably practicable. Application of the ALARP principle means challenging the adequacy of existing measures and considering any additional practicable measures identified.

Alternatives and progress

When a number of **options for risk reduction** exist, all options (or combination of options) that are reasonably practicable must be implemented. The legal requirement to reduce risks as low as is reasonably practicable rules out HSE accepting a less protected but significantly cheaper option. At the design stage, a life-cycle approach should be adopted.

Evaluation of each of the different options, or combination of options, available for controlling a particular hazard should be made against the **same baseline case**.

It may not be reasonably practicable to **retrospectively apply a measure** to an existing plant, that would be required to reduce risks ALARP for a new plant (even if that measure has become, in effect, good practice for every new plant). Whether the measure can be applied, or not, will depend on the site-specific circumstances, the risk levels, and whether the costs of the measure are grossly disproportionate.

Other considerations

HSE is only concerned with the risks to people, although we should be mindful that measures intended to reduce risks to people may conflict with the need to reduce risks to the environment.

Environmental risks also give rise to liability.

HSE current high risk ALARP assessments therefore take into account proportionality and precautionary approaches.

Consideration of employees and others are considered separately:

The Future

- The current approach to ALARP is no longer consistent with UK post-Brexit Law
- There is a re-work of ALARP, which is in the broader context of COSHH review and WEL policy
- However, the civil law won't change! You can still be sued...