

This guide explains how to perform a risk assessment

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1. About Risk Assessment

1.1 Why do it?

Whatever the number of employees we have a duty of care for ourselves and others around us, we have to assess health & safety risks to ensure that no-one is injured or becomes ill. Risk assessment is a legal requirement that will enable you to effectively manage health and safety in your workplace.

In order to comply with the legal requirement, you need to identify what hazards arise from your work, who might be harmed and what action you need to take to protect yourself and others. Employers who fail to comply with the law can be prosecuted.

Risk assessment makes good business sense, too. Taking action to minimise risks will result not only in a healthy, motivated workforce, but also fewer opportunities for lost production.

1.2 What is it?

The assessment itself is a process of identifying potential hazards in your work and putting controls into place to control the risks. You need to decide how significant each hazard is and whether or not you have adequate precautions in place to reduce the risk to its minimum level.

The key steps in carrying out a risk assessment are:

- List work activities
- Look for the hazards
- Determine the risk
- Decide if the risk is tolerable
- Prepare a risk control action plan (if necessary)
- Review the adequacy of the action plan
- Record your findings

Tailor your risk assessment process to the needs of your business. The process does not need to be a complex one in most organizations.

2. The Process of Effective Risk Assessment

Risk assessment is the process of identifying and assessing potential hazards and implementing risk controls. It is a fundamental part of any OH&S management system.

All employers and employees are obliged by law to assess the risks arising from the hazards in their work activities. Risk assessment will help you to decide whether or not your controls are adequate.

OHSAS 18001 defines the key terms as follows:

'Hazard': source or situation with a potential for harm in terms of injury or ill health, damage to property, damage to the workplace environment, or a combination of these (3.4)

'Risk': combination of the likelihood and consequence(s) of a specified hazardous event (3.14)

All risks have two elements:

- · the likelihood that a hazard may occur;
- the consequences of the hazardous event.

BS 8800 (Annex D) outlines the steps involved in risk assessment:

- List work activities. Write down everything you know about each of these activities.
- Look for the hazards. Who is likely to be harmed and how?
- Determine the risk. What do you think are the risks with each hazard? Are your existing controls adequate? What would happen if they failed?



- Decide if the risk is tolerable. Could it be reduced further? Are you at least meeting legal requirements?
- Prepare a risk control action plan. How are you going to deal with any areas found wanting?
- Review the adequacy of the action plan. Assess your risks again on the basis of the revised controls.
- Record your findings. Use checklists to identify what action has been taken and what still has to be done. Tell your employees.

3. Risk Assessment In Practice

The HSE can provide the following advice on risk assessment, applicable to all organizations:

- Five Steps to Risk Assessment (INDG163)
- Guide to Risk Assessment Requirements: Common provisions in health and safety law (INDG218)

The following regulations cover the most common risks:

- Control of Asbestos at Work Regulations
- Control of Lead at Work Regulations
- Control of Substances Hazardous to Health Regulations
- Display Screen Equipment Regulations
- Electricity at Work Regulations
- Fire Precautions (Places of Work) Regulations
- Management of Health and Safety at Work Regulations
- Manual Handling Regulations
- Noise at Work Regulations
- Personal Protective Equipment Regulations
- Workplace Regulations

4. Risk Assessment in Detail

Your organization's approach to risk assessment should take into account the nature and complexity of the risks involved. Do not waste time on laborious procedures if your organization's risks are assessed to be small and your controls are good.

4.1 The process of risk assessment

We have included in the appendix a checklist for the actions to be undertaken when undertaking a risk assessment.

4.1.1 STAGE 1. List work activities

A list needs to be made of all work activities. You can group these activities according to their geographical location or work team or production stage.

4.1.2 STAGE 2. Look for the hazards

Hazards in any work activity can be identified by asking three key questions:

- 1. Is there anything that could cause harm?
- 2. Who or what could potentially be harmed or damaged?
- 3. In what ways could harm occur?

There are many ways to go about categorizing hazards. You could, for example, categorize them by topic, such as fire, electrical, temperature, etc. Alternatively, you could develop a prompt list of hazards and then determine, using a checklist, whether or not these are likely to exist in each work activity. Examples of such hazards could be:



- falls from heights
- substances that could be inhaled or ingested
- repetitive strain injury
- slippery surfaces
- violence towards staff
- manual lifting
- environment too hot or too cold
- inadequate lighting for the job

You should involve the workforce in identifying hazards as they are best placed to know how tasks are actually carried out.

4.1.3 STAGE 3. Determine the risk

Once you have a list of hazards, the next stage is to assess the level of risk from each hazard. To do this, you need to consider two things:

- How serious would the harm potentially be, and;
- How likely is it to happen.

How you make these judgments depends upon the nature of your organization's business. A formal system will use numerical scores. A less formal scheme could use, for example, a 'high', 'medium' and 'low' assessment system.

4.1.3.1 How serious would the harm be?

In order to determine this, you will need to consider the potential nature of the harm and whether the harm is likely to be superficial, moderate or extreme. Some examples are:

1) Superficial:

Minor cuts and bruises, eye irritation from dust, minor and temporary ill-health

2) Moderate:

Burns, concussion, fractures, deafness, skin conditions, repetitive strain injury, ill-health

3) Extreme:

Amputations, major fractures, poisonings, multiple or fatal injuries, occupational cancer or other severely life shortening diseases.

4.1.3.2 What is the likelihood of harm?

In order to estimate the likelihood of harm from an identified hazard, start by considering the risk controls already in place. You can also use guidance from suppliers or codes of practice for some specific hazards.

Consider the consequences of as many unplanned events as you can think of. Some examples are:

- The number of people who may be exposed;
- The failure of services, such as electricity or water;
- The failure of safety devices or protective equipment;
- Unsafe or foolhardy acts by staff.



4.1.4 STAGE 4. Decide if the risk is tolerable

There are many methods of estimating risk level, but most are based on some kind of scoring system both for their likelihood and their potential consequences. The table below shows one simple method for deciding whether risks are tolerable. Risks are classified according to their estimated likelihood and potential severity of harm.

Risk Estimator

	Superficially harmful	Moderately 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

In this model, a 'tolerable' risk is one that has been reduced to its lowest possible level.

4.1.5 STAGE 5. Prepare a risk control action plan

Using the table above, a list of actions can be produced and prioritized. You will get a more balanced view if you involve a cross-section of people in this task as it is a subjective exercise. The table below may help you to decide what action needs to be taken.

Risk Control Action Plan

Level of Risk	Action Plan
Trivial	No action required, no need to keep records.
Tolerable	Existing controls are adequate, but monitor to ensure this is maintained.
Moderate	Implement, with deadlines, measures to reduce risk. Take into account the cost effectiveness of such measures.
Substantial	Stop work until the risk has been reduced. Allocate sufficient resources to significantly reduce the risk.
Intolerable	Stop work until the risk has been reduced. This may necessitate the allocation of unlimited resources.

The next stage in implementing your risk control action plan is to decide what controls are necessary. To do this, you need to think about the following:

- a) Can the hazard be completely eliminated, for example by using safer materials;
- b) If not, can the risk be reduced, for example by using safety guards or robotics;
- c) Introduce or increase planned maintenance, such as regular inspections and servicing of machinery, to reduce risk;
- d) Protect staff with safety equipment or clothing and restrict access to hazardous areas;
- e) Install alarm systems and back-up controls for emergencies.

4.1.6 STAGE 6. Review the adequacy of the action plan

Once you have decided what new controls are necessary, it is advisable to consider the consequences of each proposed action before implementing the controls. You need to consider the following:

- Will risk levels be reduced to tolerable levels?
- Is the solution cost effective?
- Are the controls practical and workable? Ask your operatives.
- Will you be able to easily and effectively revise the controls if changes to production methods are introduced at a later date?



4.1.7 STAGE 7. Record your findings

A record should be kept of each action point, indicating the risk assessment and what controls have been introduced. Each new control should be reviewed within a stated timescale to ensure the effectiveness of the corrective measures.

5. Checklists

5.1 Risk assessment in your organization

Task	Tick Box
	e zex
List work activities	
Look for the hazards with each of these work activities	
Determine the risk associated with each hazard	
Decide if the risk is tolerable	
Prepare a risk control action plan	
Review the adequacy of the action plan	
Record your findings	

5.2 Requirements for a risk assessment program

Action	Tick Box
Designate a senior manager in the organization to promote and manage the activity	
Consult and involve the workforce as well as managers	
Implement a training program for staff involved in risk assessment	



Review the risk assessment to ensure it is sufficiently detailed and robust	
Use standard forms to record the risk assessment findings, including the likelihood and consequences of hazards, action taken, review date, etc.	

5.3 Work activity information requirements

How long does the task take?	
However the state of the tender of the state	
How often is the task carried out?	
Where is the task carried out?	
Who normally carries out the task?	
Who else may be affected by the work?	
What training have staff received about the tasks?	
What training have stail received about the tasks:	
Are there any written procedures for the tasks?	
What plant and equipment is used and are there any manufacturers'	
instructions?	
What are the characteristics of any materials that will be handled?	
What are the characteristics of any materials that will be haraled.	
Do materials have to be moved by hand?	
What services, such as electricity or compressed air, are used?	
Are any substances used or given off? What safety information about	
these do we have?	
those do we have.	
Are there any legal or regulatory requirements relevant to the task?	



What control measures are already in place?	
What data do we have on previous incidents, accidents and ill-health relating to this task?	