

Risk Assessment Guidance

Undertaking a Risk Assessment

The following is a simplified structure for carrying out a risk assessment.

Decide on the type of risk assessment

Is the object of the risk assessment static or dynamic?

For relatively static operations, the risk assessment should be such that it is not necessary to repeat it every time someone is exposed to a hazard in comparable circumstances.

For more dynamic activities, i.e. where the detailed work activity may change fairly frequently or the workplace itself changes and develops. For example, on a temporary site or where the work involves peripatetic workers moving from site to site. The risk assessment might have to concentrate more on the broad range of risks that might arise so that detailed planning and employee training can take account of those risks and enable them to be controlled as and when they arise.

Identify the Activities

Analyse the activities involved in the overall activity being risk assessed and list them.

Ensure that relevant hazards or risks are addressed; the aim is to identify the significant risks in the workplace. Do not obscure those risks with an excess of information or by concentrating on trivial tasks. Address what actually happens in the workplace or during the work activity.

Ensure that all groups of employees and others who might be affected are considered; do not forget office staff, night cleaners, maintenance staff, security staff, and visitors. Identify groups of workers who might be at particular risk; for example, young* or inexperienced workers; those who might work alone; any disabled staff.

**Risk assessments for people under the age of 16 need to be presented to the parents or guardians of that individual. For young people in general, the assessment should take into account their immaturity, physical and mental capabilities – see Instruction 25.*

Assess the Hazards involved

Next identify the hazards, i.e. those aspects of the work e.g. substances or equipment used, work processes or work organisation which have the potential to cause harm. If there are any specific Acts or regulations to be complied with, these may help identify the hazards.

Hazards may include equipment hazards, physical hazards; chemical/biological hazards (note that special assessments have to be done for these, e.g. COSHH for chemical hazards). Human factors (including health and disability), waste materials, material handling, physical parameters of the site.

Be systematic in looking at hazards and risks. For example it may be necessary to look at hazards or risks in groups such as machinery, transport, substances, electrical etc. In other cases, an operation by operation approach may be needed.

Assess the Severity of each Hazard

These are given a numerical value depending on where on the range between negligible and catastrophic the severity of the hazard is.

Assess the Probability or Likelihood

These are also given a numerical value depending on where on the range between extremely remote and probable the chance of the hazard becoming a risk is.

Determine the Risk Rating for each Hazard

Assess the risks from the identified hazards; if there are no hazards, there are no risks. Some risks may already be controlled in some way, whether by deliberate measures or by the circumstances in which they are found. The effectiveness of those controls needs to be taken into account in assessing the residual risk.

If using numerical values for probability and severity the risk is simply:

$$\text{Risk} = \text{Severity} \times \text{Probability}$$

Rank According to Priority

Use the risk rating system determined in paragraph 20 to allocate a priority to the risk determined. Remember that trivial risks can usually be ignored as can risks arising from routine activities associated with life in general, unless the work activity compounds those risks, or there is evidence of significant relevance to the particular work activity.

Actions and Control Measures Required

The law recognises that there is no need to waste resources on small risks and thus the exercise is a means of identifying the risks which do need attention, and in which order they should be tackled. There is a priority in which remedial measures should be considered;

- a. Can the hazard be eliminated?
- b. Can the hazard be reduced?
- c. Can people be removed from the hazardous situation?
- d. Can the hazard be contained?
- e. Can people's exposure to a hazard be reduced?
- f. Can protective equipment be used?

Take account of existing preventive or precautionary measures; they may already reduce the risk sufficiently in terms of what needs to be done to comply with relevant statutory provisions. But are they working properly? Does action need to be taken to ensure they are properly maintained?

Emergency Procedures

These can include: training, first aid, evacuation procedures and accident procedures. It is important that a specifically identified person is responsible for each of the actions or control measures deemed to be required and for each of the emergency procedures decided upon.

All employees are to be aware of any emergency plan within their place of work. Individuals should be identified to take responsibility for tasks, however ensure that others can assume the responsibility if an individual is absent or incapacitated.

Record the Assessment

The law requires that the risk assessment be recorded if there is significant risk. This is to be recorded on the Council's risk assessment form, recording significant findings and any group that is identified as being at risk. The findings are then to be brought to the attention of each employee.

Review the Assessment

The risk assessment should be reviewed:

- a. When all remedial actions have been taken
- b. To ascertain if the measures have been successful (modify assessment as required)
- c. When the law or codes of practice change
- d. When the activity, process or any of its components change
- e. Whenever there is reason to suspect that it is no longer valid

Risk Rating

The risk rating system adopted by the Council involves the multiplication together of the likelihood and severity of injury. The risk ratings aid the assessor to quantify the level of risk, and allow valid comparisons can be made.

Risk Rating Model

Risk Rating Model	1 Trivial injury	2 Slight injury	3 Serious injury	4 Major injury or death
1 Most unlikely	Minimal Maintain control measures	Minimal Maintain control measures	Low Review control measures	Medium Improve control measures
2 Unlikely	Minimal Maintain control measures	Low Review control measures	Medium Improve control measures	Medium Improve control measures
3 Likely	Low Review control measures	Medium Improve control measures	High Improve control measures immediately. Consider stopping process	High Improve control measures immediately. Consider stopping process
4 Most likely	Medium Improve control measures	Medium Improve control measures	High Improve control measures immediately. Consider stopping process	High Improve control measures immediately. Consider stopping process

Likelihood of it happening:

Most unlikely, unlikely, likely, most likely.

Severity of injury:

Trivial injury (Hazard will not result in serious injury or illness - Remote chance of damage beyond minor first aid case).

Slight injury (Hazard can cause illness, injury or equipment damage - Remote chance of damage beyond minor first aid case).

Serious injury (Hazard can result in serious illness, severe injury, property & equipment damage).

Major injury or death (Danger exists, hazard capable of causing death and illness on a wide scale)

Hazard Checklists

The following checklists contain details of the various categories of hazards which should be considered by those undertaking a risk assessment. The lists of examples of hazards in each category are not exhaustive and consideration must be given to all significant hazards.

Hazards associated with plant and equipment (including non-powered plant and hand tools)

Hazards associated with materials and substances

Category	Type of Harm	Examples of Hazard
Mechanical	Trapping (crushing, drawing in and shearing injuries)	Two moving parts or one moving part and a fixed surface Conveyor belt and drive Vehicle tail lifts Shredding machines, compactor
	Impact (includes puncture)	Something that may strike or stab someone or can be struck against i.e. moving vehicle, vehicle tail lifts, automatic doors, drill.
	Entanglement (rotating parts)	Drill chuck and bit Power take off shaft Food mixing machines Abrasive wheel
	Ejection (of work piece or part of tool)	Staple gun Using hammer and chisel Abrasive wheel
Fire/explosion/combustion	Burns	Heating oil Cooking oil Paper store Plastic foam, including furniture
Flammable substance (inc. highly and extremely flammable)	Burns	Petrol, propane gas, methane, paraffin, acetone

Category	Type of Harm	Examples of Hazard
Oxidising substances	Burns	Some oxidising agents Highly flammable gas in confined space
Health hazards Corrosive/irritating substances	Skin effects	Acids and alkalis Cleaning chemicals Petrol Used engine oil
Particles	Respiratory diseases	Asbestos fibres Silica dust Dust mite faeces Pigeon droppings Coal dust Grain/wood dust
Toxic substances	Poisoning	Weed killer Pesticide
Biological agents	Infectious disease (e.g. HIV, Hepatitis, Weil's Disease)	Hypodermic needles Sewage Body fluids Polluted water
Hazards by contact	Cuts, abrasions	Glass Rough timber Concrete blocks
	Burns, frostbite	Hot food Frozen food Hot oils Refrigerants

Hazards associated with the place of work

Category	Type of Harm	Examples of Hazard
Pedestrian access	Tripping, slipping	Damaged floors Trailing cables Spillages Debris Wet grass Sloping surface Uneven steps Changes in floor level

Category	Type of Harm	Examples of Hazard
Work at heights	Falls	Fragile roof Edge of roof Edge of mezzanine floor Work on ladder Erecting scaffold Hole in floor
Obstructions	Striking against	Low headroom Sharp objects
Stacking/storing	Falling materials	High stacks Insecure stacks Inadequate racking Stacking at heights
Work over/near liquids, dusts, grain etc.	Falling into substances, drowning, poisoning, suffocation etc.	Silo Tank Reservoir Sump Work over or on a river Swimming pools
Emergencies	Trapping in fire	Locked exits Obstructed egresses Long exit route

Hazards associated with the working environment

Category	Type of Harm	Examples of Hazard
Light (NB Also increases risk of contact with other hazards)	Eye strain	Glare Poor lighting
Temperature	Heat stress, sunburn, melanoma, hypothermia	Outdoor work Hot weather Cold weather Wind chill factor Work in rain, snow etc. Hot or very cold processes
Confined spaces	Asphyxiation, explosion, poisoning, etc.	Work in a tank Chimney Pit Basement Unventilated room Vessel Silo Service Tunnels
Ventilation	"Sick Building Syndrome", nausea, tiredness, etc.	Fumes Odours Tobacco smoke

Hazards associated with method of work

Category	Type of Harm	Examples of Hazard
Manual Handling	Back injury, hernia etc.	Lifting Lowering Carrying Pushing Pulling Hot/cold loads Rough loads Live loads – animal/person
Repetitive movements	Work related upper limb disorders	Keyboard work Using screwdriver Using hammer and chisel Stuffing envelopes
Posture	Work related upper limb disorders, stress etc.	Seated work Above head height Work at floor level
Contractors	Injuries and ill health to employees by contractor work	Working above employees Use of harmful substances Dangerous equipment brought onto site
Contractors	Injuries and ill health to contractors' employees by work in premises	Dangerous equipment on site Services (e.g. underground electricity cables) Hazardous materials on site
Work in public areas	Injuries and ill health of the public	Trailing cables Traffic/plant movement Obstruction to blind person Obstruction to prams, etc. Work above public, e.g. from scaffold

Other types of hazard

Category	Type of Harm	Examples of Hazard
Attack by animals	Bite, sting, crushing etc.	Bees and wasps Dog Bull Fleas
Attack by people	Injury, illness, post traumatic stress disorder	Criminal attack Angry customer Drunken person Drug abuser Mentally ill person
Natural hazards	Various injuries, illnesses	Lightning High winds

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