

Risk Assessments

Introduction

These notes are taken from an Introduction to Risk Assessment Course devised in 1993 by Euan MacAuslan, Environmental Health Training Co-ordinator in the Royal Borough of Kensington and Chelsea's Directorate of Environmental Health. In 1994, the Royal Institute of Public Health acknowledged the production of the notes.

Training

The Royal Borough of Kensington and Chelsea is just one of many training centres offering health and safety training. It is a registered centre for the Chartered Institute of Environmental Health's Intermediate Certificate in Risk Assessment. Visit the link to **Health & Safety Training** for details of courses run by the Royal Borough.

Workplace safety courses

- [Non-certificate Workplace Safety Course](#)
- [Foundation Certificate in Health and Safety \(level 1\)](#)
- [Supervising Health and Safety Certificate \(level 2\)](#)
- [Advanced Certificate in Health and Safety \(level 3\)](#)
- [Risk Assessment Certificate and Non-certificate \(level 2\)](#)
- [Principles of Manual Handling \(level 1\)](#)
- [Principles of COSHH \(level 1\)](#)

For a one day non-certificate in-house course to introduce you and your management team or health & safety committee to basic risk assessment please contact Euan MacAuslan (Environmental Health Training Co-ordinator) on 020 7341 5606 or ewan.macauslan@rbkc.gov.uk .

Further information

[Health and Safety Executive: Risk Assessment](#) Download a couple of documents in PDF format, and learn the requirements for **risk** assessment in businesses, as well as how to effect
it.www.hse.gov.uk/pubns/raindex.htm

[Health & Safety Executive - HSE Free Leaflets](#)

Download "Five **Steps to Risk** Assessment" and "A Guide **to Risk** Assessment Requirements". Or contact HSE Books for hard copies.
www.hse.gov.uk/pubns

Definitions

1. HEALTH: A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
2. SAFETY: Suggests security, freedom from danger and risk of damage or injury.
3. HAZARD: Something with the potential to cause harm.
4. RISK: The likelihood that the harm could occur in the actual circumstance of use.
5. ACCIDENT: An unplanned and uncontrolled event, which has led to or could have caused injury to persons, damage to plant or other loss.
6. INJURY: Physical or mental harm to a person or persons.
7. RISK ASSESSMENT: Identification of hazards present in any undertaking and evaluation and the extent of the risks involved, taking into account whatever precautions are being undertaken.
8. EXTENT OF RISK: The number of people who might be affected and the consequences.

Contents of a Risk Assessment

There are certain logical steps to take when carrying out a risk assessment

1. Look for the hazard.
2. Decide who might be harmed and how.
3. Evaluate the risks arising from the hazards and decide whether existing precautions are adequate or more should be done.
4. Record the findings.
5. Inform colleagues of your findings.
6. Review your assessment from time to time and revise it if necessary.

Lines of defence

1st line of defence: Controlling risk.

2nd line of defence: Maintaining control.

3rd line of defence: Dealing with breakdowns in controls.

Types of risk assessments

There are two types of risk assessments:

1. Qualitative: Object probability estimate based upon known risk information applied the circumstances being considered.
2. Quantitative: This type is subjective, based upon personal judgement backed by generalised data risk.

The two types of risk assessment (qualitative and quantitative) are not mutually exclusive.

Qualitative assessments are easier to make and are the ones required for legal purposes.

When there are types of work, whose hazards and risks are similar in different workplaces or physical areas, a general risk assessment can be made.

Risk Assessment Concepts

Risk assessments should be included in the safety policy document.

1. Establish who in the ground has carried out risk assessments.
2. Ask the ground who will be responsible for carrying out risk assessments in their places.
3. Assess knowledge of group by asking them what has be assessed in terms of "risk".

Risk assessments are not new. An example of a common risk assessment is, for instance, when we cross the road - do we use the pedestrian crossing or take a chance?

The Health & Safety at Work etc. Act. 1974 has, for nearly 20 years, required employers to take "reasonably practicable" precautions in various areas to safeguard employees.

To do this and to ensure that "reasonable practicable" precautions are taken it is necessary to make a balanced judgement about the extent of the risk and its consequences against the time, trouble and cost of the steps needed to remove or reduce it.

It can be said that the steps are not necessary only if the cost is "grossly disproportionate". With the introduction of the Management of Health and Safety at Work Regulations 1992, employers now have to record significant results and the information based upon the assessments are given to employees in a much more specific way.

Benefits of Risk Assessment

- to enable control measures to be devised.
- to gain an idea of the relative importance of risks.
- to take decisions on controls which are cost effective and appropriate.

According to the Health and Safety Executive:

"Risk assessment is not end to itself. it is a means to better management of safety. it is a thinking process which enables management of determined priorities and allocate resources in a way which will better control or eliminate risks to health and safety at work ".

Risks are in multiple forms:

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|--|---|
| <ul style="list-style-type: none">• materials• managers• machinery | <ul style="list-style-type: none">• working environment• natural forces• other people |
|--|---|

Effects of uncontrolled risks:-

- | |
|---|
| <ul style="list-style-type: none">• damaged materials/machinery, production, output and quality• injured people• polluted environment |
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The process of risk assessment involves:-

- Hazard details
- Applicable standards
- Evaluation of risks
- Preventive measures
- Review dates/feedback details

Legislation

Regulation 3 of the Management of Health & Safety at Work Regulations 1992/1999 states:

“ Every employer shall make a suitable and sufficient assessment of:

- the risks to the health and safety of his (sic) employees to which they are exposed while they are at work; and
- the risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him or his undertaking: for the purposes of identifying the measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions”.

The findings must be recorded if five or more are employed.

Any employee cannot take civil action against an employer if there is a breach of duty.

There is an Approved Code of Practice that explains exactly what is required.

Persons responsible for carrying out risk assessments should refer to the Health & Safety at Work etc. Act 1974 that was referred to briefly in the introduction. Sections 2, 3, 4 and 6 are relevant. These will form the basis of any checklist.

Examples of legislation that requires risk assessments to be carried out (NB: this list is not comprehensive):

1. Control of substances hazardous to health regulations 1999

Hazardous substances include: paints, cleaning chemicals, reagents, dusts, fumes and waste products. Require employers to assess health risks and to select suitable control measures in the use of a particular hazardous substance. These affect all businesses. An example could be: “Some hand

cleansing gels can remove fats and natural oils from the skin. This increases the risk of absorption through the skin of hazardous substances. Gels may be suitable at the end of the shifts, but they should not be used during them.”

2. Electricity at work regulations 1989

These too affect small businesses. You should refer to the approved Code of Practice relating to these regulations. Employers have to assess risk such as: letting employees wire plugs or employing contractors to maintain electrical equipment.

3. Noise at work regulations 1989

These regulations require employers to reduce the risk to employees arising from noise exposure as far as is reasonably practicable. An assessment is required to determine the extent of the problem. The assessment must be recorded. Refer to the appropriate approved Code of Practice.

4. Provision and use of work equipment regulations 1992

Work equipment includes any machinery, appliance, apparatus, or tool and any assembly of components, in order to achieve a common end, are arranged and controlled so that they function as a whole.

Use means stopping, starting, erecting, installing, dismantling, programming, setting, using, transporting, repairing, modifying, maintaining, servicing and cleaning.

Employers are required to identify the risks to health and safety, and provide employees with appropriate information, training, instruction and supervision. Refer to the Approved Code of Practice.

5. Manual handling operations regulations 1992

A *manual handling* operation means any transporting or supporting of a load (including lifting, putting down, pushing, pulling, carrying or moving) by hand or bodily force (not mechanised).

Employers should ensure employees avoid hazardous manual handling operations. Employees must not, so far as is reasonably practicable, be exposed to those operations which involve a risk of injury. Refer to the Approved Code of Practice.

NB: Trainer please note: there is a video available entitled “Lighten the Load” (17 minutes) if time permits.

6. Workplace (health, safety and welfare) regulations 1992

The approved Code of Practice for these regulations says that:

“ Risk assessments may show that the workplace or the work should be re-organised so that the need for people to work at an unguarded edge or to work in temperatures which may induce stress does not arise in the first place.”

Health: Ventilation, temperature, lighting, cleanliness, etc., are factors which can affect the health of employees.

Safety: This includes the maintenance of workplaces, devices and systems, condition of floors, windows, doors, lifts, etc.

Welfare: This includes sanitary conveniences, washing facilities, drinking water, etc.

7. Health & safety (display screen equipment) regulations 1992

Every employer must perform a suitable and sufficient analysis of those workstations which are used by users or operators, to assess health and safety risks to which they are exposed as a consequence. Refer to the appropriate approved Code of Practice.

Please note that it is not the role of the Local Authority or HSE to carry out risk assessments for you.

However, the enforcement agencies may ask to see your risk assessments and take copies or them when investigating accidents or injuries, or collecting evidence for prosecution.

Sources of Information

Many of you will want to know where to get hold of further information to enable you to carry out your risk assessments.

1. *Internal sources*
2. *External sources*

HMSO	CIEH	British Safety Council
HSE Books	BSI	Local Authorities
ROSPA	CBI	National Health & Safety Groups

Consultants	IOSH	
Trade Journals		University programmes
Company Safety Policies		Voluntary safety bodies
Insurance for Liability Policies		Department of Trade & Industry
Trade Associations		Educational institutions
Safety Officers		Trade Unions
Safety Representatives		Safety Committee members
Technical Journals		Safety Exhibitions

Consider using the Accident Book if in doubt where you are to start.

Workplace hazards

If you carry out a risk assessment you will have to ask the operative of a particular piece of equipment or the employee performing a specific task as to what they think the hazards are.

Objective and subjective opinions should be recorded. Refer to the manufacturers' instructions or data sheets, as well as accidents and ill health records. All these will help you gain a true perspective.

e.g. <u>Office</u>	VDUs Photocopying Machines	Staplers Paper Guillotines
<u>Shop</u>	Moving loads Shelving	Package
<u>Kitchen</u>	Floors Slicers	Hobs Cleaning Chemicals

Hazard Evaluation

Evaluation of the hazards is achieved by assembling information from those familiar with the hazards, such as insurance companies, suppliers, and from reference sources such as those discussed earlier.

Ranking Hazards

This involves creating a priority list of hazards to be controlled on a “worst” first basis. It takes account of the consequences and probabilities of the event occurring. Such ranking could include severity and probability values.

One example of each:

<u>Severity:</u>	Catastrophic - imminent danger exists (death/illness wide-scale).
	Critical - hazards can result in serious illness, severe damage to property, equipment and injury
	Marginal - hazard can cause illness or damage (results will not be serious).
	Negligible - hazard will not result in serious injury or illness.
<u>Probability:</u>	Probable - likely to occur immediately.
	Reasonable Probability - may occur
	Remote - may occur.
	Extremely Remote - unlikely to occur.

Who might be harmed?

In this session you will need to think about the kinds of risks which employees in your business face every day. There are two factors which are said to affect the health and safety of an individual. These are human and occupational.

Let us look at the occupational factors, or how various jobs affect various people in a variety of ways.

Q: Name an occupation and the risks associated with it?

A:	Nursing	-	manual handling injury
	Cleaning	-	dermatitis
	Scaffolding	-	falls
	Carpentry	-	wood dust
	Welding	-	'arc eye'
	Typing	-	RSI
	Administration	-	Stress
	Catering	-	Burns
	Waiting staff	-	Exposure to cigarette smoke

You might be able to think of many more. However, when carrying out a risk assessment you will have to decide who might be harmed and how.

Do not forget to think about the people who might not be in your workplace all the time.

Q: Who are these people?

A: Cleaners, visitors, contractors, maintenance personnel, security, etc...

Also, include members of the public or people you share your workplace with if there is a chance that they could be hurt by your activities.

An example might be cleaning contractor mopping a floor in a busy corridor used regularly by employees in an office block.

Alternative, consider this example:

"An enthusiastic young computer specialist offered to assist his boss to carry some new equipment from his car to their fifth floor office. The equipment was not particularly heavy, but it was an awkward shape. Everything went fine; they negotiated powerful swing doors, the lift even a tight corner in the fifth floor corridor close to the coffee machine. But as they stood back to admire their new acquisitions, having carefully unwrapped it and placed it on a suitable table, the junior partner caught his heel on some of the packaging, fell backwards, cracked his head on the corner of a desk, and spent two days in hospital"

Human factors can also affect your risk assessment. Consider the young, old or those who have repetitive jobs. Horseplay and carelessness must be pre-determined.

Has anyone been in a hurry or been distracted? The chances are you forgot about the hazards that you might have created when for instance you trailed a telephone wire across the office floor and forgot to tell your colleagues.

Or, how about the teenage boy who was taken on in a new factory where practices were accepted as normal.

You will have to consider information, training, instruction and supervision.

Evaluation and control of risks

Even after all precautions have been taken usually some risk remains. For each significant hazard you will have to decide whether this remaining risk is high, medium or low.

First Satisfy yourself that you have complied with the law, e.g. there are legal requirements on prevention of access to dangerous parts of machinery.

Then Ask yourself whether generally accepted industry standards are in place.

You need to aim to achieve making all risks small by adding to your precautions if necessary.

Improving health and safety not cost a lot. The Norwegian Director of Safety for an Oil Company was quoted once as saying: "If you think safety is expensive, you should see the cost of an accident".

For instance: placing a mirror in a dangerous blind corner to help prevent vehicle accidents in a right angled corridor, or putting non-slip material on a slippery step.

Ask yourself: "Can I get a rid of the hazard altogether?"

If not: "How can I cut out the risks so that harm is reduced?"

Personal Protective Equipment (PPE) should only be used as a last resort.

Remember, some corrective measures are better that others, and some are very ineffective indeed as controls.

There is a sequence, which should be followed to control the risks-

1	<i>Eliminate the hazard</i>	(e.g. use alternatives, design improvements, change process)
2	<i>Substitute</i>	(e.g. replacement of chemical with one of less risk)
3	<i>Use of barriers</i>	(e.g. isolation - remove hazard from the worker segregation - remove the worker from the hazard).
4	<i>Use of procedures</i>	(e.g. limiting exposure time; dilution of exposure, safe systems of work).
5	<i>Use of warning systems</i>	(e.g. signs, instructions, labels).
6	<i>Use of PPE</i>	(e.g. used only as a last measure when all other options have failed. PPE can create its own risks and an assessment of the suitability of the PPE is made before it is chosen).

Recording findings

Ask assessment must be recorded where there are five or more people employed in a business.

You should note down the more significant hazards and record your most important conclusions, i.e.:-

" Electrical installations: insulation and earth checked and found sound".

Your employees must be informed about your findings.

You will need to show that: - a proper check has been made

- you asked who might be affected
- you dealt with all obvious significant hazards taking into account the number of people who could be involved
- the precautions are reasonable and the remaining risk is low.

The main points are: (1) the precautions are extremely reasonable, and
(2) that there is something to show that a paper or electronic check has been made.

Keep written documents for future reference or use.

Q: Why?

A: They may be asked for by an inspector, or if you become involved in any action for civil liability by an employee, contractor or visitor. It also helps to show that you have done what the law requires.

Certain documents may already list hazards and precautions so you do not need to report all that. You could consider referring to the document and keeping it in a safe place.

Q: Which documents could you refer to?

A:

- Manuals
- Arrangements in your health & safety policy statement
- Company rules
- Manufacturers' instructions
- Your health & safety procedures
- Some HSE booklets and notes can be referred to, e.g. Health & Safety in Kitchens and Food Preparation Areas HS (G) 55

The HSE have produced a free guidance page to carry out your risk assessment: [Managing risks and risk assessment at work](#).

You must ensure that your assessments are valid, up to date, and applicable to the workplace. A fresh assessment will be required if the risk changes as conditions change, and whenever situations or conditions are encountered for the first time.

Do not amend your assessment for every minor change. Employers can ask responsible employees, safety representatives or safety officers to help. But remember, employers are responsible for seeing that risk assessments are adequately done.

The Management of Health and Safety at Work Regulations 1992 require co-operation and sharing of information between employers sharing or acting as host in a workplace.

Risk assessments will form the basis of that information. In formal circumstances of a contract there may be a contractual or legal requirement to exchange risk assessment data.

The information given to others about risks will include the health & safety measures in a place of work and will be sufficient to enable the other employers to identify anyone nominated to help the emergency evacuation.

Examples of risk assessment scenarios

Scenario 1

Workplace experience sixth formers are frequently given the task by a manager to move unlabelled boxes of differing sizes and weights from a delivery bay to various shelves located in a two storey building.

Scenario 2

A contract cleaner is used by the freeholder to clean the stairs of a four storey building which is occupied by three different small business (one of which has frequent visitors).

Scenario 3

VDU operators in a secretarial agency spend 40 hours a week at their workstations. 5 staff in the last year have gone sick with eye strain and backache.

Scenario 4

A hardware shop has a key cutting counter which customers can use. A queue always forms at lunchtime. When keys are being cut the operatives wear goggles, but it is possible for the public to stand next to the operative.

Scenario 5

A meat feed slicer operative who received training four years ago recently lost a thumb after deciding to take short cuts (!) by not using a guard when told to do so. As part of your accident investigation you have decided to carry out a risk assessment.

Scenario 6

A customer fell to his death in your department store after falling off an escalator. This is the first accident on the escalators in the 10 years they have been installed.

Scenario 7

The fruit and vegetables manager in your supermarket has asked you to carry out a risk assessment near the grapes and cherries stall. She has noticed customers dropping grapes on to the floor whilst bagging them up.

Scenario 8

Operatives in your workplace report general discomfort when working with a new material. You decide to carry out a risk assessment before contacting the suppliers. How would you start?

Scenario 9

Filing cabinets have to be moved from one office to another across a corridor on the same floor by two staff. Assess the risk.

Scenario 10

A new cleaning chemical is to be used in your workplace. Staff complain of skin irritation.