Health and Safety Guidance

Risk Assessment

GUIDANCE/17/RA/00

This document gives guidance on general risk assessment. It offers advice on planning risk assessments and on the steps involved in the complete risk assessment process for compliance with University Health and Safety Policy (UHSP/0/01). An assessment summary report form is included at the end of the appendix. Whilst this guidance assists in the identification of specific hazards, it points to other documentation where a particular hazard is subject to specific Policy requirements such as for hazardous substances or ionising radiations.

(A Web browser interactive version of the hazard and risk assessment process is located at: http://www.hsu.bham.ac.uk/univ/risk/riskass.htm)

Further information and advice may be obtained from the Health and Safety Unit.

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GUIDANCE/17/RA/00
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Risk Assessment

INTRODUCTION

The University Health and Safety Policy requires Heads of Budget Centres to ensure that risk assessments are carried out for all activities under their control.

“Heads of Budget Centres must ensure that risk assessments are carried out for all activities under their control as required by current University Policies and that appropriate action is taken to eliminate or control the risks identified.”

There is a general statutory requirement1 to carry out risk assessments for all work activities. There are further statutory requirements2 to carry out risk assessments for work activities that present specific risks. This document primarily provides guidance on the actions needed to ensure fulfilment of the general statutory duty. However, the guidance also shows how to approach assessment in such a way that any specific risk assessment requirements are also identified. Further guidance is available on specific risk assessments.

This guidance is intended to provide practical advice to assist those responsible for carrying out risk assessments.

Purpose

The purpose of risk assessments is to allow for a systematic identification of significant risks so that they can be prevented or reduced and controlled to an appropriate standard.

For the purposes of University Health and Safety policy the terms 'hazard' and 'risk' are defined as follows.

- **Hazard** means the potential to cause harm or adverse effects. A hazard is a property of any substance, equipment or activity which can cause injury or harm to health (e.g., burns, dermatitis, disease), or adverse effects (e.g., fire, explosion).

- **Risk** means the likelihood of the harm or adverse effects of a hazard being realised.

**NB** There cannot be any risk if there is no hazard. However, with appropriate control measures it is possible also to have no or only a small risk even if there is a serious hazard.

THE PRACTICALITIES OF RISK ASSESSMENT

How Should Assessments Be Planned?

In most Budget Centres there will be activities commonly performed by a variety of individuals and groups and it should be possible to divide the assessments into broad categories of work and to produce common procedures. For example:

- office accommodation, lecture theatres/seminar rooms and general circulation areas;
- workshops;
- research/teaching laboratories;
- peripatetic work and fieldwork.

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1 The Management of Health and Safety at Work Regulations 1999
2 E.g. The Control of Substances Hazardous to Health Regulations 1999
In very large and complex Budget Centres these categories can be further subdivided. This could mean that research and teaching laboratories are dealt with separately or research is divided into groups or projects. Particular activities performed by a limited number of people may also be assessed separately.

*It is important to follow local management or organisational arrangements in the division of the work wherever possible and to ensure that all areas are covered.*

**Generic Assessments**

Generic assessments are assessments produced once only for a given activity or type of workplace. For example, where there are several locations where the same activity is carried out, then a single generic assessment could be done for that activity to cover all the locations. Similarly, if staff work away from base, such as maintenance electricians, then generic assessments could be used for their hazardous work, rather than attempting to produce an assessment for each activity at each location.

*Be warned,* casual use of generic assessments can result in very poor control, and no improvement in safety. It is important to ascertain that a generic assessment is applicable to a particular situation. If the circumstances of a particular situation (such as extra hazards) differ significantly from those of the generic assessment an extension to the assessment will be required.

**THE RISK ASSESSMENT PROCESS**

Risk assessment involves the identification of the hazards present and an estimate of the extent of the risks involved, taking into account whatever precautions are inherent to the process/activity.

There is more than one approach to risk assessment, for example:

- look at each activity (not forgetting non-routine activities, e.g., maintenance, breakdowns etc.) which could cause harm or adverse effects;
- look at hazards and risks in groups e.g. machinery, transport, substances, materials, electrical etc;
- look at each section e.g. stores, workshop, laboratory, office, etc.

The approach should match the circumstances.

The actions required for an assessment to be suitable and sufficient and compliant with other legal requirements are summarised in the following five steps:

- **Step 1 Identify the hazards**
- **Step 2 Decide who might be harmed**
- **Step 3 Evaluate the risks arising from the hazards and decide what should be done to control them**
- **Step 4 Record the findings and put into practice the control measures**
- **Step 5 Review the assessment from time to time and revise it if necessary**

**Step 1 Identify the hazards**

There are a number of simple ways in which hazards can be identified. In order to achieve a suitable and sufficient risk assessment it is essential to identify all the hazards associated with an activity. In all cases team consultation is a powerful aid.

For complex activities it can be useful to break down the activity into its component parts, perhaps by job analysis. For example, this could comprise:
a large piece of equipment
- installation
- setting/adjustment
- normal operating
- breakdown
- cleaning/spillage/decontamination
- overhaul
- dismantling

for hazardous substances
- storage of materials
- transporting materials
- preparation of solutions
- performing experiment
- dealing with accidental release
- clearing up after experiment
- disposal of waste

Remember, if there is no hazard then there is no risk.

**Step 2 Decide who might be harmed**

Look for who may be harmed by the hazards and how. Include people who may not be in the workplace all the time, e.g. cleaners, visitors, contractors, maintenance personnel, patients, members of the public, etc. If the workplace is shared with others, include them too if there is a chance that they may be harmed in some way by the activities.

**Step 3 Evaluate the risks arising from the hazards and decide what should be done to control them**

Is there any real chance of harm? Take account of any precautions that are inherent to the process/activity; check against University Health and Safety Policy and Guidance and consider whether the precautions are adequate and, if not, what further action is needed.

There may be cases where the hazards and risks are not specifically addressed in University Health and Safety Policy and Guidance. If the precautions meet standards set by a legal requirement or a recognised industry standard or standard of good practice (e.g., a British Standard or HSE guidance), then they are likely to be adequate, unless the standards or requirements are out of date. As a last resort, consider what represents good practice. Is it practicable to do more, especially for those risks which could result in serious harm?

Go through the following questions:
- can the hazard be removed altogether;
- if not, how can the risks be controlled so that harm is unlikely.

In any case of doubt, contact the Health and Safety Unit for advice.

**Hierarchy of Control** There are five classes of measure for controlling risk and they need to be considered and applied in the order below:

1. Elimination/substitution
   - Elimination (e.g. buying ready-mixed or pre-assembled materials or equipment);
   - Substitution by something less hazardous and involving less risk.

2. Engineering controls
   - Enclosure (enclose it in a way that eliminates or controls the hazard/risk);
   - Guarding/segregation of people.

3. Administrative controls
   - Safe system of work that reduces the risk to an acceptable level (e.g. standard operating procedure);
   - Permits to work;
   - Controlled areas;
• Written procedures that are known and understood by those affected;
• Adequate supervision;
• Identification of training needs.

4. Personal protective equipment

5. Information/instruction (e.g., signs, handouts)

Some controls are essential. In many cases a suitable combination of control methods may be necessary. Often, more than one control option or combination of controls will provide a similar degree of control of risk. If there is a choice of controls of equal effectiveness, that which involves the least effort is preferred. Account may also be taken of the most risk and cost effective option. Where people are involved, their level of competence needs to be taken into account. In some work, e.g. electrical work, it could be a limiting factor.

Consider foreseeable emergencies, what can go wrong. Will existing controls be sufficient or will there be special requirements for dealing with emergencies?

Controls will need to be monitored for effectiveness and some will be subject to legal requirements for periodic examination and test (e.g. COSHH requirements for local exhaust ventilation). These requirements will need to be determined and recorded in the assessment.

**Health Surveillance** A risk assessment will also need to identify any requirement for health surveillance where an identifiable disease or health condition related to the work is likely to arise. Examples include animal allergy, work related upper limb disorder and vibration white finger.

**Step 4 Record the findings and put into practice the control measures**

Use the *proforma* at the end of this document (Appendix) for recording the significant findings of an assessment. Satisfactory completion of this *proforma* provides evidence of having taken the steps the law requires.

The record can be greatly simplified by referring to other documentation, such as manuals, the arrangements in the Budget Centre Health and Safety Policy, health and safety procedures and University Health and Safety Policy and Guidance. These may well already have listed hazards for equipment or processes and the precautions and arrangements for controlling risk. It is not necessary to repeat all that. Similarly, reference can be made to other assessments where they are relevant. Examples of this are reference to existing COSHH or noise assessments where those are suitable and sufficient. If the required COSHH or other assessment does not exist then the outcome of this general risk assessment will be to request the appropriate specific assessment.

If a workplace is shared, others must be told about any risks the work could cause them, and what is being done to protect them.

**Step 5 Review the assessment from time to time and revise it if necessary**

Workplace changes, new equipment, substances and procedures could lead to new hazards and risks. If there is any significant change, then the assessment should be revised to take account of the new hazard. In any case, it is good practice for assessments to be reviewed periodically and in some cases (e.g. COSHH), it is a statutory requirement. However, *don't* amend assessments for every trivial change, or for every new job that has to be attempted. Walk around the area and look afresh at what can *reasonably be foreseen* as likely to cause harm. Ask the people who work there what they think. They may come up with hazards which they have noticed in the course of their work and which are not immediately obvious. Accident records, manufacturers' instructions, or data sheets can also help.
Specific Assessment Requirements in University Health and Safety Policy

Manual Handling Operations: UHSP/6/MHO/95

Biological Safety: UHSP/9/BS/96
  • Biological Safety: Risk Assessment of Work with Biological Materials form
  • Biological Safety: Risk Assessment of Work with Genetically Modified Micro-organisms form

Hazardous Substances Policy - UHSP/15/HS/00
  S2 - Assessment, Pro forma and guidance:

Making a Chemical Hazard and Risk Assessment: USP/90/CHRA/16
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### Hazard and Risk Assessment Summary

#### Assessment Number

**School/Dept**

**Location of Activity**

**Date of Assessment**

**Assessor**

**Activity Assessed**

(Attach protocols)

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#### Assessment of Hazard and Risk

(List only hazards from which there is a significant risk of serious harm under foreseeable conditions)

<table>
<thead>
<tr>
<th>PERSONS AT RISK</th>
<th>PERSONAL HARM?</th>
<th>LIKELIHOOD of HARM?</th>
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#### Key

- **Ug**: Undergraduate
- **Pg**: Postgraduate
- **S**: Staff
- **C**: Contractor
- **V**: Visitor
- **Pa**: Patient
- **Pu**: General Public
- **Yp**: Young Person
- **Nm**: New/Expectant Mother

#### Personal Harm

- **F**: Fatality
- **Mj**: Major Injury
- **Mn**: Minor Injury

#### Likelihood

- **Y**: Yes/Very High
- **Pr**: Probable
- **Po**: Possible
- **R**: Remote

#### Risk Significance

- **F**: Significant risk
- **Mj**: X = Insignificant risk

Major Injuries:
- Loss of or broken limb
- Loss of or damaged eye
- Loss of consciousness
- Acute illness needing medical treatment
- Permanent ill health or disability

Date for Review

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### Assessment of Hazard and Risk

**HAZARD**
(List only hazards from which there is a significant risk of serious harm under foreseeable conditions)

**PERSONS AT RISK**
(See key, Indicate number)

<table>
<thead>
<tr>
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### Control Measures Required