

Health and Safety Department

Completing Risk Assessments

Document Control

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1. Introduction

This guidance is aimed at helping people undertake risk assessments in the workplace. A risk assessment is an important step in protecting the health and safety of staff, students and visitors, as well as a legal requirement, (the Management of Health and Safety at Work Regulations 1999 (MH Regs) and other relevant statutory provisions), and University policy.

The MH Regs impose a duty on employers to carry out suitable and sufficient risk assessments of all significant hazards in the workplace which pose risks to employees and anyone else who may be affected by any work activity. Where the risk assessment made under the MH Regs identifies significant specific hazards, such as hazardous chemicals or noise, a risk assessment dealing with those hazards must be undertaken. This is a requirement of relevant legislation. E.g. Control of Substances Hazardous to Health Regulations (Coshh) 2002 or the Noise at Work Regulations 2005. Separate University policies deal specifically with these topics. (Please refer to the University Health and Safety Service (UH&SS) website, ([UH&SS website](#)) for further information)

Risk assessments help you focus on the significant risks that really matter in the workplace. Those with the potential to cause real harm. In many instances, straightforward measures can readily prevent or control risks. For example, ensuring spillages are cleaned up promptly so people do not slip, or cupboard drawers are kept closed to ensure people do not walk into them.

For most, that means simple, cheap and effective measures to ensure that the most valuable asset, the workforce, is protected. The law does not expect all risk to be eliminated, but we are required to protect people at work “so far as reasonably practicable”. This guidance tells you how to achieve that with a minimum of fuss.

2. What is risk assessment?

A risk assessment is simply a careful examination of what, in your work, could cause harm to people, so that you can weigh up whether you have taken enough precautions or, whether you should do more to prevent harm. Workers and others have a right to be protected from harm caused by a failure to take reasonable control measures.

Accidents and ill health can ruin lives and affect the business of the University e.g. if important research is disturbed, machinery damaged, insurance premiums increase or fines are imposed as a result of legal action. The University, as an employer is legally required to assess the significant hazards in the workplace so that plans can be made to prevent or control those risks. Schools and Professional Services complete risk assessments internally, with input from the relevant School Safety Officers (SSO) /

Departmental Safety Officers (DSO) when required, or, where specialist input is needed, the UH&SS).

3. How to assess general risks in the workplace

Follow the five steps in this guidance:

Step 1

Identify the significant hazards

Step 2

Decide who might be harmed and how

Step 3

Evaluate (quantify) the risks and decide whether existing controls are adequate or whether additional controls are needed

Step 4

Record your findings and implement them

Step 5

Monitor controls, review your assessment and update if necessary

Do not overcomplicate the process. Many risks are well known and the necessary control measures are easy to apply. It is probably already known, for example, whether employees or students work alone, use step ladders or where people are most likely to slip or trip. If so, checks should be made to ensure that reasonable precautions to avoid injury have been taken.

If you are confident you understand what is involved, you can do the assessment yourself. You don't have to be a health and safety expert. If you work in a large department or support service, you could ask your line manager, SSO or DSO to help you. If you are not confident, get help from someone who is competent. That is, someone with the necessary skills, knowledge, ability, training and experience to do the job competently. In all cases, you should make sure that you involve staff or their representatives, including official Union reps, in the process. They will have useful information about how the work is done and that will make your risk assessment more thorough and effective.

When thinking about a risk assessment, remember:

- a **hazard** is anything that may cause harm, e.g. chemicals, electricity, working at height, trip hazards etc.
- the **risk** is the likelihood that somebody is harmed by the hazard. This together with an indication of the severity of the resulting harm can be used to quantify the risk.
- **harm** is the injury, ill-health to people, costs and effects on the University.

Step 1

Identify the significant hazards.

First you need to work out how people could be harmed. When you work in a place every day, it is easy to overlook some hazards, so here are some tips to help you identify the ones that matter:

- **Walk around** your workplace and look at what could reasonably be expected to cause harm.
- **Ask members of staff** or their representatives what they think. They may have noticed problems that are not immediately obvious to you.
- **Visit the [HSS website](#)** , telephone extension 222181 or email HSE@lboro.ac.uk, or, go to; [Health and Safety Executive \(HSE\) website](#) , where free practical guidance on hazards, where they occur and how to control them, is available.
- **Check manufacturer's instructions** for equipment / machinery, or material safety data sheets for chemicals, as they can be very helpful in spelling out the hazards and putting them in their true perspective.
- Have a look back at your **near miss, accident and ill-health records**, these often help to identify the less obvious hazards.
- Contact any **trade or professional association(s)** you may be affiliated to.
- **Remember to think about long-term hazards to health**, (e.g. repetitive strain injuries), as well as safety hazards.

Step 2

Decide who might be harmed and how.

For each hazard you need to be clear about who might be harmed. It will help identify the best way of managing the risk. That doesn't mean listing everyone by name, but rather identifying groups of people, (e.g. 'people working in the storeroom' or 'passers-by'). In each case, identify how they might be harmed, e.g. what type of injury or ill health might occur. For example, 'store-men may suffer back injuries from repeated lifting of boxes'.

When assessing who can be harmed by a particular work activity, special consideration must be given to individuals that fall into the following categories;

- female workers of child bearing age,
- pregnant or nursing mothers,
- young persons under the age of 18 years, and,
- people with disabilities.

Extra thought will be needed for some hazards;

- cleaners, visitors, contractors, maintenance workers etc, who may not be in the workplace all the time,
- members of the public, if they could be harmed by your activities,
- if you share your workplace, you will need to think about how your work affects others present, as well as how their work affects your staff – talk to them; and, ask your staff if they can think of anyone you may have missed.

Step 3

Evaluate (quantify) the risks and decide whether existing controls are adequate or

whether additional controls are needed.

Having spotted the hazards, you then have to decide what to do about them. The law requires you to do everything 'reasonably practicable' to protect people from

harm. You can work this out for yourself, but the easiest way is to compare or "benchmark" what you are doing, with good practice. (Refer to professional body's, trade associations, reputable companies, other Universities).

Firstly, look at what you are already doing. Think about what controls you have in place and how the work is organised. Then compare this with the risk rating and decide whether the risk is now tolerable or acceptable. If not, (if the risk remains substantial or Intolerable), look again at best practice and see if there's more you should be doing to bring the risk down to at least tolerable levels. In asking yourself this, consider the hierarchy of controls:

- 1 **Elimination:** Can I get rid of, (avoid), the hazard altogether?
If not, how can I control the risks so that harm is unlikely and the risks reduced to an acceptable level? When controlling risks, apply the principles below, if possible in the following order:
- 2 **Substitution:** Try a less risky option (e.g. use a machine that vibrates less than the former or a chemical that is less hazardous but does the same job);
- 3 **Engineering controls:** Prevent access to the hazard (e.g. by guarding or enclosure);
- 4 **Administrative controls:** Organise work to reduce exposure to the hazard, e.g. put barriers between pedestrian's and vehicles, and / or, provide welfare facilities (e.g. washing facilities for removal of contamination, limit peoples exposure.
- 5 **Personal Protective Equipment (PPE) and other safety equipment:** Issue protective clothing, footwear, goggles, ear defenders, and / or, equipment such as fall arrest equipment, lifting equipment etc. Make sure it's the right equipment for the job and that it's used correctly.

PPE is the last resort – can be very effective, but must be used in combination with other controls!

Improving health and safety need not cost a lot. For instance, placing a mirror on a dangerous blind corner to help prevent vehicle accidents is a low-cost precaution considering the risks. Failure to take simple precautions can cost a lot more, if an accident does happen.

Involve staff, so that you can be sure that what you propose to do will work in practice and won't introduce any new hazards.

Step 4

Record your findings and implement them

Putting the results of your risk assessment into practice, will make a difference when looking after staff, students and visitors. Writing down the results of your risk assessment,

and sharing them, encourages you to do this.

A number of formats are acceptable as follows;

For routine risks which occur on a regular basis, the attached generic risk assessment form, **(See; Appendix A on page 8)**, School / Departmental is an acceptable format for recording the risk assessment.

The following link takes you to an online COSHH risk assessment form which also

has an integral generic risk assessment form which can be used. Link;

<https://www.lboro.ac.uk/media/www/lboro.ac.uk/content/healthandsafety/downloads/COSHH%20Risk%20Assessment%20Safety%20Documentation.pdf>

One off activities, in particular research projects where there is a significant risk, should be under the supervision of an academic supervisor, or in Support Services, a responsible manager.

One off high risk activities involving plant, premises and services should be covered by a health and safety method statement, linked into the risk assessment. This would include non routine deliveries and collections of a high risk nature, for example special deliveries of materials, machinery or the installation and removal of plant and machinery requiring special transport and mechanical handling systems.

For routine repetitive laboratory experiments and demonstrations it is acceptable for the outcome of the risk assessment and associated control measures, to be listed upon the laboratory instruction sheet.

Risk assessments should be accessible to anyone wishing to see them and to those that are liable to be affected. The conclusions of the risk assessment and controls must be clearly communicated to those at risk. It may be appropriate to display the risk assessment adjacent to the equipment or experiment concerned.

When writing down your results, keep it simple. For example, 'Tripping over rubbish bin's provided, staff instructed, weekly housekeeping checks', or 'Fume from welding: local exhaust ventilation used, efficiency monitored and regularly checked and maintained'.

Risk assessments are not expected to be perfect, but they must be suitable and sufficient. You need to be able to show that:

- a proper check was made;
- those affected were consulted;
- significant hazards have been considered, taking into account the number of people who could be involved;
- the precautions are reasonable, and the remaining risk is low; and,
- staff, or their representatives, were involved in the process.

If you find that there are quite a lot of improvements that you could make, big and small, don't try to do everything at once. Make a plan of action to deal with the most important things first.

A good plan of action often includes a mixture of different things such as:

- a few cheap or easy improvements that can be done quickly, perhaps as a temporary solution until more reliable controls are in place;
- long-term solutions to those risks most likely to cause accidents or ill health;
- long-term solutions to those risks with the worst potential consequences;
- arrangements for training employees on the main risks that remain and how they are to be controlled;
- regular checks to make sure that the control measures stay in place; and

clear responsibilities – who will lead on what action, and by when.

Remember, prioritise and tackle the most important things first. As you complete each action, tick it off your plan.

Step 5

Monitor controls, review your assessment and update if necessary

Few workplaces stay the same. Sooner or later, you will bring in new equipment, people substances and procedures that could lead to new hazards. It makes sense, therefore, to review what you are doing on an ongoing basis. Every year or so formally review where you are, to make sure you are still improving, or at least not sliding back.

Look at your risk assessment again. Is the risk being controlled to an acceptable or tolerable level? Have there been any changes? Are there improvements you still need to make? Have staff or students spotted a problem? Have you learnt anything from accidents or near misses? Make sure your risk assessment stays up to date. When you are busy, it's all too easy to forget about reviewing your risk assessment, until something has gone wrong and it's too late. Why not set a review date for this risk assessment now? Write it down and note it in your diary as a regular event.

If there are significant changes, don't wait. Check your risk assessment and, where necessary, amend it. If possible, it is best to think about the risk assessment when you're planning your change – that way you leave yourself more flexibility.

Risk assessments undertaken on research projects are by the nature of research activities, dynamic and must be kept under constant review. Variations in risk arising as the work develops, and significant changes in risk rating, as well as additional controls, must be recorded. It is acceptable for research students to operate a laboratory notebook where references to such changes can be made, providing that this is communicated to, and agreed with, the academic supervisor.

4 Getting help

A model generic risk assessment form and guidance note on how to complete it is, attached as **Appendix A - (See page 8)**.

More information about risk assessment, University health and safety policies, guidance,

legal requirements and standards can be found on the [UHSS website](#) Or by contacting the UH&SS on 222181 or email; hse@lboro.ac.uk.

5 Further information – documents and links

[The health and safety toolbox: how to control risks at work](#); (website)

Risk assessment – a brief guide to controlling risks in the workplace; INDG 163 (rev 4) 4

Managing for health and safety HS(G) 65

[Managing for health and safety](#); (website)

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If risk remains Substantial or Intolerable, what additional controls are required? (14)

Action plan: (15)

Ref No	Further action required	Action by whom	Action by when	Done

(Residual) risk rating taking into consideration additional controls? (16)

Checked /validated by: _____ **Date:** _____

Notes to accompany the generic risk assessment form

The use of this form is recommended by the UH&SS. It is strongly recommended that it be used for all new assessments, and when existing assessments are being substantially revised. However, its use is not compulsory. Providing the assessor uses the same approach and addresses the same issues; alternative layouts may be used.

- (1) **Date:** Insert the date that the assessment form is completed. The assessment must be valid on that day and subsequent days, unless circumstances change and amendments are necessary.
- (2) **Assessed by:** Insert the name and signature of the assessor. Assessments should be carried out by a competent person. A competent person is someone with sufficient training and experience or knowledge and other qualities to enable them to properly carry out the task.
- (3) **Checked / Validated by:** (**delete one*).

Checked by: Insert the name and signature of someone in a position to check that the assessment has been carried out by a competent person who can identify significant hazards and assess risk, and that the control measures are reasonable and in place. The checker will normally be a line manager, supervisor, academic supervisor, SSO / DSO etc. Checking will be appropriate for most risk assessments.

Validated by: Use this for higher risk scenarios, e.g. where complex calculations have to be validated by another “independent” person who is competent to do so, or where the control measure is a strict permit-to-work procedure requiring thorough preparation of a workplace. Those validating should preferably have attended a risk assessment course, and will probably be an experienced professional with expertise in the task being considered. Examples of where validation is required include designs for pressure vessels, load-bearing equipment, lifting equipment carrying personnel or items over populated areas and similar situations.

- (4) **Location:** insert details of the exact location, e.g. building, floor, room, laboratory etc
- (5) **Assessment ref. no.:** use this to insert any local tracking references used by the School /Department or Support Service.
- (6) **Review date:** insert details of when the assessment will be reviewed as a matter of routine. This might be in a year’s time, at the end of a short programme of work, or longer period if risks are known to be stable. Note that any assessment must be reviewed if there are any significant changes to the work activity, the people exposed to the risk, processes etc

- (7) **Task / premises:** insert a brief summary of the task, e.g. typical office activities such as filing, DSE work, use of miscellaneous electrical equipment, use of hand

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held tools. Or, research projects (give title) involving the use of typical laboratory hardware, including fume cupboards, hot plates, ovens, analysis equipment, flammable solvents, etc.

- (8) **Activity:** use the column to describe each separate activity covered by the assessment. The number of rows is unlimited, although how many are used for one assessment will depend on how the task / premises is sub-divided. For laboratory work, activities in one particular lab or for one particular project might include; use of gas cylinders, use of fume cupboard, use of computer or other electrical equipment, use of lab ovens, hot plates or heaters, use of substances hazardous to health, etc
- (9) **Significant hazard:** for each activity, list the significant hazards. Remember to look at hazards that are not immediately obvious. For example, use of a lathe will require identification of the machine hazards, but also identification of hazards associated with the use of cutting oils (dermatitis), poor lighting, slipping on oil leaks, electricity etc. The same activity might well have several hazards associated with it. Special risk assessments required by specific legislation, e.g. dangerous or hazardous substances (DSEAR / Coshh), manual handling, DSE work etc, should be recorded on risk assessment forms specific to the hazard, e.g. the Coshh assessment form in the University Coshh policy. University health and safety policies are listed at;
<http://www.lboro.ac.uk/services/health-safety/policies/policies/>
- (10) **Who might be harmed and how:** insert everyone who might be affected by the activity and specify groups particularly at risk. Remember those who are not immediately involved in the work, including cleaners, young persons on work experience, maintenance contractors, IT Services engineers and Facilities Management personnel carrying out routine maintenance and other work. Remember also that the risks for different groups will vary, e.g. someone who needs to repair a laser may need to expose the beam path more than users of the laser would do. Vulnerable groups could include children on organised visits, someone who is pregnant, or employees and students with known disabilities or health conditions. (This is not a definitive list and may be added to).

For each group, describe how harm might come about, e.g. an obstruction or wet patch on an exit route is a hazard that might cause a slip, trip and fall; use of electrical equipment might give rise to a risk of electric shock; and the use of an ultraviolet light source could burn eyes or skin.

- (11) Existing measures to control the risk:** list all measures that already mitigate the risk. Many of these will have been implemented for other reasons, but should nevertheless be recognised as means of controlling risk. For example, restricting access to laboratories or machine rooms for security reasons also controls the risk of unauthorised and unskilled access to dangerous equipment. A standard operating procedure or local rules (e.g. for work with ionising radiation, lasers or biological hazards), will often address risks. Some specific hazards may require separate detailed assessments in accordance with specific legislation (e.g. Coshh, DSEAR, manual handling, DSE work). (See item 9). Where this is the case, and a

detailed assessment has already been done in another format, the master risk assessment can simply cross-reference to other documentation. For example, the activity might be the use of a carcinogen. The hazard is exposure to hazardous substances and the existing control measures might be listed in a Coshh assessment. Controls might also include use of qualified and/or experienced staff who are competent to carry out certain tasks. The action plan might include training requirements for other people who will be carrying out those tasks.

- (12) Risk rating:** the simplest way of quantifying risk is to rate the risk numerically. Matrices such as the one illustrated in Table 1, can be used to quantify risk. The likelihood of an injury occurring and the severity of that injury are given numerical values which are multiplied together to give an overall risk rating.

A combination of numerical values, risk phrases and traffic light systems can be used to indicate levels of risk. Using such a matrix can be helpful for prioritising your actions to control risk. It is suitable for many risk assessments but in particular, for more complex situations. However, it does require competence to judge the likelihood and severity of harm accurately. Getting this wrong could result in applying unnecessary control measures or failing to take important ones.

Table 1

Low (1-4) - Acceptable risk. No additional controls are required. Consideration may be given to a more cost-effective solution or improvement that imposes no additional cost burden. Monitoring is required to ensure that controls are maintained.

Medium (5-12)- Tolerable risk. Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and limited. Risk reduction measures should be implemented within a defined time period. Where the moderate risk is associated with extremely harmful consequences, further assessment may be necessary to establish more precisely the likelihood of

harm as a basis for determining the need for improved control measures.

High (12-20) – Substantial risk. The event should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken.

Extreme (20-25) - Intolerable risk. The event must not be started or continued until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work has to remain prohibited.

- (13) Is the risk rating Acceptable or Tolerable,** the assessment is complete and should be checked and signed off by a supervisor, manager or safety officer. A review date should be entered on the form and controls monitored to ensure they are used and effective.
- (14) Is the risk rating Substantial or Intolerable?** More work is required before the activity can commence. If levels of risk are not controlled effectively, (e.g. remain substantial or intolerable), what additional controls are required to bring the risk level down to tolerable or acceptable levels, (so far as reasonably practicable)?
- (15) Action plan:** Include details of any actions necessary in order to meet the requirements of the information in part **(14)**. Identify someone who will be responsible for ensuring the action is dealt with and enter a date by which time this should occur.
- (16) (Residual) risk rating taking into consideration additional controls?** This must remain at worst tolerable and at best, acceptable.