

## **Planning and Identifying Hazards**

Ideally, the individual (or team for more complex activities) should visit the workplace and note the hazards (as well as any concerns with the current arrangements e.g. a concern might be an emergency stop button that would be easier to access if repositioned).

- Check manufacturers' instructions or data sheets for chemicals and equipment - they can be very helpful in explaining the hazards and putting them in their true perspective. Equipment should be checked for a CE mark/UKCA and the appropriate instruction manuals referenced on the risk assessment form (the CE mark/UKCA is not a guarantee that the product meets all of the requirements of relevant EU product safety law however).
- Consider any known accidents or instances of ill-health associated with the activity being assessed. Please contact the health and safety team for further information.
- Take account of non-routine operations e.g. maintenance, cleaning operations or changes in production cycles.
- Consider long-term hazards to health e.g. high levels of noise or exposure to harmful substances.
- There are some hazards with a recognised risk of harm e.g. working at height, working with chemicals, machinery and asbestos. In addition, if the process or operation involves specific hazards e.g. radiation, vibration etc. useful guidance maybe found either through organisations such as the Universities Safety and Health Association (USHA) or via the HSE website. If specialist support or advice is required to complete the risk assessment, contact the Health & Safety lead associated with the Faculty/Directorate.
- For research projects, installation and construction issues may need to be considered along with decommissioning/disposal plans.
- Where local Standard Operating Procedures are used, these should be referenced on the risk assessment form (including the reference number and version/publication date).

Visit the HSE website ([www.hse.gov.uk](http://www.hse.gov.uk)) – the HSE publishes practical guidance on hazards and how to control them.

## **Identifying the Hazards**

- Hazards could result from substances including explosives, chemical and biological agents, including by-products e.g. X-rays or fumes from soldering whilst others may be mechanical such as crushing and lacerations. The physical location and layout of the work area (lone working, slippery floor, confined spaces etc.) need to be considered for potential sources of hazards too. Finally, do not overlook less obvious hazards such as noise, driving or even encountering aggressive people or animals (especially when risk assessing a fieldwork activity).
- The assessment should consider issues that arise should the activity need to be:
  - HArd-wired to the mains electrical supply
  - Connected to the mains gas or water supplies
- Where this is the case, the Principal Investigator/Student Supervisor must ensure ECS have been consulted.
- Appendix 1 provides some guidance to identify hazards.

## Decide who may be harmed and how

- Consider who might be harmed and how this may occur. Employees and students may be the obvious groups at risk but consider cleaners, maintenance workers, visitors and contractors. Specific consideration should be given to vulnerable people such as pregnant workers, young people and individuals with disabilities.
- If students are involved in activities, their age and inexperience should be taken into account - younger people are generally at more risk.
- Take into account that employees or students involved in the process may be non-native speakers and could struggle to understand what is required of them.
- If the workplace is shared, consider how the work proposed affects others present, as well as how their work could affect those directly involved in the process.
- Ask your colleagues whether they can think of anyone who may have been missed e.g. visiting academics.

## Decide what could reasonably be expected to go wrong

- You may find it useful to think about the 'Consequences' as listed within the risk matrix:
  - Fatality,
  - Severe or chronic illnesses or permanent life changing impact
  - Injury such as fracture of bones, dislocation, or acute ill health e.g. occupational asthma, occupational dermatitis
  - An injury that requires first aid treatment and subsequent treatment by health care professional
  - An injury that requires basic first aid treatment such as administering a plaster, individual able to continue at work e.g. minor cuts, bruising, abrasions, strains or sprains
  - Superficial or no physical injury or health effects
- It is important to focus on what could **reasonably be expected** to occur. Think about what you have experienced previously with this activity, what accidents/near misses may have occurred.
- Getting the views of colleagues may also help.

## Evaluate the Risk and decide on Precautions - Control Measures

Focus on controlling significant hazards that could result in serious harm to people. There is no requirement to further control hazards which are considered minor.

**Hierarchy of controls** - when considering controls, the 'hierarchy of control' should be taken into account. These are presented in order of effectiveness and where an approach is not reasonably practicable to achieve, consideration should then be given to the next approach in the hierarchy.

- **Elimination** - redesign the job or substitute a substance so that the hazard is removed or eliminated
- **Substitution** - replace the material or process with a less hazardous one
- **Control of risk at source** - use work equipment or other measures to prevent falls where working at height cannot be avoided. Install or use additional machinery such as local exhaust ventilation to control risks from dust or fume. Separate the hazard from operators by methods such as enclosing or guarding dangerous parts of machinery/equipment. Give priority to measures that protect collectively over individual measures
- **Education and Training** - ensure that workers and others understand the risk and know what they must do e.g. by giving toolbox talks on health issues or running through the method statement during induction

- **Personal Protective Equipment (PPE)** - only after all the aforementioned measures have been tried and found ineffective in controlling risks to a reasonably practicable level, must personal protective equipment (PPE) be used. PPE **MUST NOT** be considered as the primary means of control
- **Supervision and Monitoring** should be considered as part of the controls (see sections 6 & 8 of the procedure). Particular emphasis should be placed on more frequent checking where new employees and/or students are involved in hazardous activities.
- Where concerns are raised in relation to existing procedures or controls that are not routinely followed (they may be considered impractical or too time-consuming), they should be noted on the form and raised to the appropriate level of management. Employees should be encouraged to identify controls that are ineffective and do not add value to the risk reduction process.
- Remember long-term hazards to health e.g. high levels of noise or exposure to harmful substances.
- Every risk assessment should be completed to include consideration of emergency planning arrangements. The location of local emergency arrangements (first-aid stations, emergency showers, specific PPE to contain spillages etc.) should be referenced on the Risk Assessment Form and subsequently checked to ensure they are suitable for their intended purpose e.g. safety showers can be easily accessed from the location of the activities in the risk assessment. Additionally, document emergency arrangements for a university-wide incident such as power-outage (impact of equipment or refrigeration units failing for example).

## Implementing Additional Controls

- Should additional controls be required that will result in a lower risk rating, the assessor will need to ensure appropriate monitoring of these is in place to ensure they are actioned.
- Actions to implement additional controls should only be assigned to those with the appropriate level of authority to complete the task required.
- The aim is to implement all additional control as soon as reasonably possible and it should be noted that the risks are not controlled to an acceptable level until this stage of the operation is complete.
- Additional controls that cannot be completed within the timescale should be escalated as appropriate within the Faculty/School or Directorate.

## Calculating the Risk Rating

The risk matrix scoring system is a subjective tool and on its own has insufficient granularity to accurately determine the level of risk. The primary reason for using the risk matrix in the Oxford Brookes University risk assessment procedure is to identify the level of authorisation required.

Rating	Interpretation	Authorisation
≤ 6 = Low Risk	Acceptable but ensure that controls are maintained	Line Manager or equivalent
8 -12 = Medium Risk	Adequate but look to improve if reasonably practicable	Line Manager or equivalent
15 – 25 = Unacceptable Risk	STOP activity and make immediate improvements	PVCD Faculty/Director of Service

- Activities attracting a score of 15-25 represent an unacceptable risk. They must be stopped immediately and not started/resumed until additional controls are introduced to reduce the risk to an acceptable level.
- The Authorising Person should review the risk assessment form and sign off the document if satisfied it is suitable and sufficient. In some cases, the Authorising Person may require an independent check of the risk assessment, prior to approval. This may be appropriate should the Authorising Person not be sufficiently knowledgeable in all aspects of the operation. The person checking the risk assessment should be one who is sufficiently knowledgeable of the activity and the risk assessment process. Where there is any uncertainty over this aspect the Authorising person should contact the health and safety lead associated with their Faculty/Directorate.

## **Modular Risk Assessments**

A project e.g. research/consultancy/MSc project may consist of a series of activities that already have appropriate risk assessments. Therefore, a modular approach could be considered to reduce duplication.

- Only risk assessments with completed RAMPs i.e. fully-controlled may be used in the modular process.
- If adopting the modular approach, the Project Manager/Principal Investigator must be confident that the project activities match the generic risk assessments exactly. If there are any differences/deviations, a new risk assessment must be developed. In this case, established risk assessments can be referenced as far as they are applicable to the new activity.
- A modular approach requires a Modular Risk Assessment Form (Appendix 3 in the procedure) to be completed and authorised by the Principal Investigator/Project Manager responsible for the project.
- Where this approach is adopted, it is essential that the risk assessments cover the full scope of the project and that the capabilities and needs of individuals involved are taken into account.
- The contents of each individual risk assessment must be communicated to staff and students involved in the project.
- Care must be taken to ensure that the current version is always included on the Modular Risk Assessment form.
- Since by its very nature, a research project is liable to change over the course of the project, the risk assessment should be considered a dynamic document that is reviewed regularly for relevance and accuracy. If the scope of the research project changes, this should be reflected in the risk assessment. Therefore, a modular approach may not be appropriate for many research projects.

## Appendix 1

### Health and Safety PEME Guidance on Hazards

When looking at the task, try to identify the hazards associated with:

**People** - will bring a range of issues with them to the task or activity:

- a) Their competence
- b) The training they have/have not received
- c) Disabilities that may affect their ability to carry out the work
- d) Physical issues such as height body size, physical strength, etc.
- e) Phobia (heights, confined spaces, etc.)
- f) Language used – do they understand what is required

Other possible people issues to consider include the number of people required for a task (do you have enough or too many involved?), the management of the task (who does what?) and the supervision requirements (who is coordinating and monitoring the activity?).

**Equipment** - there will normally be some type of equipment used in the task/activity under consideration. Work equipment covers a wide range of items including equipment found in offices, laboratories, workshops, etc. Consider the following:

- a) Is it the right equipment for the task (hazards may be introduced if the wrong type of equipment is used)?
- b) Is the equipment intrinsically hazardous (hot, sharp, imbalanced, vibrating, heavy, fragile, trapping points, hazardous substances e.g. asbestos etc.)?
- c) Are there any energy issues (electricity, pressure systems, hydraulics, etc.)?
- d) Does it need statutory testing or maintenance/calibration to ensure it is safe (electrical testing)?
- e) Does it have to be moved?
- f) Are the hazards confined to the equipment or can they affect people remote from the equipment (trailing leads, lasers, noise, etc.)?

**Materials** - this covers the substances likely to be used/required for generated by the task. Ask the following:

- a) Does the activity/task require hazardous chemicals or substances?
- b) Does the task generate any dust, vapours or mists that need to be controlled (water sprays and legionella)?
- c) Does it require raw materials or large pieces of metal, wood or other materials (manual handling, moving and storage issues, etc.)?
- d) Does the task generate special waste?

**Environment** - The risk assessment should consider if any of the following could create problems when carrying out the task/activity:

- a) Means of access/egress
- b) Lighting, heating and ventilation
- c) Slopes, ramps and steps
- d) Slippery or damaged underfoot conditions
- e) Weather conditions
- f) Obstructions