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# MakoCreate's Risk Assessment Policy

## Overview

This policy is designed to assist Mako in fulfilling their legal duties with regards to assessing risks.

## What is Risk Assessment?

A risk assessment is a tool for conducting a formal examination of the harm or hazard to people (or an organisation) that could result from a particular activity or situation.

- A hazard is something with the potential to cause harm.
- A risk is an evaluation of the probability (or likelihood) of the hazard occurring.
- A risk assessment is the resulting assessment of the severity of the outcome.
- Risk control measures are the measures and procedures that are in place in order to minimise the consequences of unfettered risk.

## Mako's Obligation

It is not only a legal requirement, but also Mako's belief, that risks to health and safety should be controlled wherever possible through risk assessments. Risk Assessments are therefore conducted, where applicable, before our service delivery on a regular basis to help cover and protect from all identifiable risks to our participants and staff, as well as any property and equipment concerned.

## Risk Assessment Objectives

- To ensure that major risks are identified and managed as part of an overarching policy with a view to promoting the safety and welfare for all Mako staff and participants.
- To ensure that suitable and sufficient risk assessments are undertaken for activities where there is likely to be significant risk.
- That identified control measures are implemented to control risk so far as reasonably practicable.
- That those affected by Mako's activities have received suitable information on what to do.
- That risk assessments are recorded and reviewed when appropriate.

## Who Conducts Risk Assessment?

Risk Assessments are conducted by the company partners or delegated staff members relating to the project/situation in hand. Assessment will not be delegated to staff who are uncomfortable about carrying out the task, or who do not have the influence to ensure that their recommendations are implemented. The risk assessment should be shared with all staff and voluntary helpers as appropriate who relate to the project/situation in question.

Risk Assessments are always reviewed by the company's Safeguarding Lead. The nominated Safeguarding Lead is Sean O'Hare. He is the point of contact for all Risk Assessment requirements and concerns for MakoCreate. He can be contacted via [info@MakoCreate.co.uk](mailto:info@MakoCreate.co.uk) or 0151 345 14 19. If Sean O'Hare is unavailable due to holiday or illness, Ian Pye will become the Safeguarding Lead until Sean returns. He can be contacted via [info@MakoCreate.co.uk](mailto:info@MakoCreate.co.uk) or 0151 345 14 19.

The Safeguarding Lead will be responsible for the maintenance of risk assessment records.

## Responsibilities:

All Mako staff are responsible for; the maintenance and upkeep of risk assessments, identifying and implementing improvements, and changes to control measures, as well as effectively communicating the outcomes to others as appropriate.

## The Process of Risk Assessment

A risk assessment can be undertaken on an object or substance, a process, a location, an activity, or a person. It is a six step process:

- Step 1: Identify the hazards
- Step 2: Decide who might be harmed and how
- Step 3: How likely is it to go wrong
- Step 4: Evaluate the risks and decide on precautions
- Step 5: Record your findings and implement them
- Step 6: Review your assessment and update if necessary

## What is a Hazard?

A hazard is anything which can cause harm e.g. electricity, chemicals, etc.

## What is Risk?

Risk is the chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be.

## Evaluating the Risk

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 what you are doing with good practice.

So first, look at what you're already doing think about what controls you have in place and how the work is organised. Then compare this with the good practice and see if there's more you should be doing to bring yourself up to standard.

In asking yourself this, consider:

Can I get rid of the hazard altogether? If not, how can I control the risks so that harm is unlikely? When controlling risks, apply the principles below, if possible in the following order:

- Try a less risky option (e.g. switch to using less hazardous equipment); prevent access to the hazard (e.g. by guarding);
- Organise work to reduce exposure to the hazard (e.g. put barriers between participants and dangers equipment);
- Issue personal protective equipment (e.g. clothing, footwear, goggles etc); and provide welfare facilities (e.g. first aid facilities).
- Involve staff, so that you can be sure that what you propose to do will work in practice.

The Safeguarding Lead monitors the control measures instigated to ensure that they are effective and implemented correctly.

## Continual Risk Control

Even though a Risk Assessment will have been undertaken prior to an activity or project taking place, it is the duty of all Mako staff to continually evaluate risks and control measures during the delivery of a given project or activity.

Staff must continually decide what controls are necessary to reduce the risk to individuals in situ.

The steps to controlling the risks are as follows:

- **Avoid the hazard** – can the hazard be avoided or altered to reduce the likelihood or risk?
- **Substitute or replace the hazard**
- **Procedural controls** – can the procedure be altered to avoid or reduce the risk? Can the individual be removed/distanced from the risk? Can the activity be carried out at a time that would have a lesser impact on others?
- **Participant management** – make sure that the staff are aware of each participants needs.
- **Setting management** – such as the monitoring of exits and entrances.
- **Additional equipment/staff** – can a lifting device or an additional person be utilised to avoid or reduce the risk?
- **Personal Protective Equipment** – consider the value of using such things as gloves, safety goggles or over garments.
- **Emergency procedures** – have contingencies in the event of things going wrong such as an accident, incident or fire.

## Review of Risk Assessments

Risk assessments need reviewing and updating annually or more frequently if necessary.

Risk assessments will be reviewed by the Safeguarding Lead or corresponding member of staff:

- When a change to the activity is identified.
- After a near miss or accident.
- When there are changes to the type of people involved in the activity.
- When there are changes in good practice.
- When there are legislative changes.
- Annually, if for no other reason.

## TYPES OF RISK ASSESSMENTS

There are three different types of risk assessments. These are generic, specific and dynamic.

**Generic activities** are those which although they are carried out at different times and locations, the hazards and risks are largely the same and do not change. For this type of activity generic risk assessments can be produced as a model for guidance only.

**A specific risk assessment** may be applicable where the hazards and risks are only applicable to a certain activity (in Mako's case - a specific project or workshop for example) and also where there is a requirement in legislation to undertake a specific assessment.

**A dynamic risk** assessment is a continuous process of identifying the hazards that occur in for example an emergency situation, assessing the risks and taking immediate action to eliminate or reduce these to an acceptable level.

## Record Keeping

Risk Assessments and associated documents must be kept for a minimum period of three years from the date which they are superseded as they may be required in the event of a litigation claim for compensation (note that claims for compensation can, generally be made up to 3 years from the date of the incident occurring).

The Safeguarding Lead will be responsible for the maintenance of risk assessment records.

# Mako Risk Assessment Form

Date: (1)	Assessed by: (2)	Checked by: (3)	Location: (4)	Assessment ref no (5)	Review date: (6)
Task / premises: (7)					

Activity (8)	Hazard (9)	Who might be harmed and how (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)

*Result : T = trivial, A = adequately controlled, N = not adequately controlled, action required, U = unknown risk*

Action plan (14)				
Ref No	Further action required	Action by whom	Action by when	Done

## **Notes to accompany General Risk Assessment Form**

This form is the one recommended by Health & Safety Services, and used on the University's risk assessment training courses. It is strongly suggested that you use it for all new assessments, and when existing assessments are being substantially revised. However, its use is not compulsory. Providing the assessor addresses the same issues; alternative layouts may be used.

- (1) **Date** : Insert date that 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. For assessments other than very simple ones, the assessor should have attended the University course on risk assessments (link to STDU)
- (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 hazards and assess risk, and that the control measures are reasonable and in place. The checker will normally be a line manager, supervisor, principal investigator, etc. Checking will be appropriate for most risk assessments.

**Validated by** : Use this for higher risk scenarios, eg 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. The validator should also have attended the University’s risk assessment course or equivalent, and will probably be a chartered engineer or 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, ie building, floor, room or laboratory etc
- (5) **Assessment ref no** : use this to insert any local tracking references used by the school or administrative directorate
- (6) **Review date** : insert details of when the assessment will be reviewed as a matter of routine. This might be in 1 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 vicinity, the people exposed to the risk, etc
- (7) **Task / premises** : insert a brief summary of the task, eg typical office activities such as filing, DSE work, lifting and moving small objects, use of misc electrical equipment. Or, research project [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 subdivided. 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) **Hazard** : for each activity, list the 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, etc. The same activity might well have several hazards associated with it. Assessment of simple chemical risks (eg use of cleaning chemicals in accordance with the instructions on the bottle) may be recorded here. More complex COSHH assessments eg for laboratory processes, should be recorded on the specific COSHH forms (link).
- (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, Estates personnel carrying out routine maintenance and other work. Remember also that the risks for different groups will vary. Eg 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).

For each group, describe how harm might come about, eg an obstruction or wet patch on an exit route is a hazard that might cause a trip and fall; use of electrical equipment might give rise to a risk of electric shock; use of a 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 (eg for work with ionising radiation, lasers or biological hazards) will often address risks. Some specific hazards may require detailed assessments in accordance with specific legislation (eg COSHH, DSEAR, manual handling, DSE work). 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 use of a carcinogen, the hazard might be exposure to hazardous substances, the existing control measures might all 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; an action plan might include training requirements for other people who will be carrying out those tasks.
- (12) **Risk Rating** : the simplest form of risk assessment is to rate the remaining risk as high, medium or low, depending on how likely the activity is to cause harm and how serious that harm might be.

The risk is **LOW** - if it is most unlikely that harm would arise under the controlled conditions listed, and even if exposure occurred, the injury would be relatively slight.

The risk is **MEDIUM** - if it is more likely that harm might actually occur and the outcome could be more serious (eg some time off work, or a minor physical injury).

The risk is **HIGH** - if injury is likely to arise (eg there have been previous incidents, the situation looks like an accident waiting to happen) and that injury might be serious (broken bones, trip to the hospital, loss of consciousness), or even a fatality.

Schools or administrative directorates may choose to use other rating systems. Typical amongst these are matrices (of 3x3, 4x4, 5x5 or even more complex) which require the assessor to select a numerical rating for both "likelihood that harm will arise" and "severity of that harm". These may give a spurious sense of accuracy and reliability – none are based on quantitative methods. There are methods of estimating risk quantitatively, and these may be appropriate for complex design of load bearing structures and the like. Advice on methods of risk assessment is available from HSS. Whatever system of assessment is adopted, it is **essential** that the assessor has received suitable training and is familiar with the meaning of the terms (or numbers) used.

- (13) **Result** : this stage of assessment is often overlooked, but is probably the most important. Assigning a number or rating to a risk does not mean that the risk is necessarily adequately controlled. The options for this column are:

**T = trivial risk.** Use for very low risk activities to show that you have correctly identified a hazard, but that in the particular circumstances, the risk is insignificant.

**A = adequately controlled, no further action necessary.** If your control measures lead you to conclude that the risk is low, and that all legislative requirements have been met (and University policies complied with), then insert A in this column.

**N = not adequately controlled, actions required.** Sometimes, particularly when setting up new procedures or adapting existing processes, the risk assessment might identify that the risk is high or medium when it is capable of being reduced by methods that are reasonably practicable. In these cases, an action plan is required. The plan should list the actions necessary, who they are to be carried out by, a date for completing the actions, and a signature box for the assessor to sign off that the action(s) has been satisfactorily completed. Some action plans will be complex documents; others may be one or two actions that can be completed with a short timescale.

**U = unable to decide. Further information required.** Use this designation if the assessor is unable to complete any of the boxes, for any reason. Sometimes, additional information can be obtained readily (eg from equipment or chemicals suppliers, specialist University advisors) but sometimes detailed and prolonged enquiries might be required. Eg is someone is moving a research programme from a research establishment overseas where health and safety legislation is very different from that in the UK.

**For T and A results**, the assessment is complete.

**For N or U results**, more work is required before the assessment can be signed off.

- (14) **Action Plan.** Include details of any actions necessary in order to meet the requirements of the information in Section 11 'Existing measures to control the risk'. Identify someone who will be responsible for ensuring the action is taken and the date by which this should be completed. Put the date when the action has been completed in the final column.