

BASIC PRINCIPLES OF RISK ASSESSMENT

It is recognised that in order to be considered competent to carry out risk assessment training will be necessary.

Regulation 3(1) of the Management of Health and Safety at work Regulations 1999 requires that a suitable and sufficient risk assessment is carried out.

The general principles are to:

- identify the hazards
- decide who might be harmed
- evaluate the risks
- decide whether existing controls are adequate
- record findings
- review assessment and revise if necessary

Definitions:

Hazard

Something with the potential to cause harm.

(This can include substances or machines, methods of work and other aspects of work organisation).

Risk

The likelihood that the harm from a particular hazard is realised. The extent of risk covers the population which might be affected by a risk and that risk therefore reflects both the likelihood that harm will be caused and its severity.

The risk assessment process needs to take account of the views of those involved in the activity being assessed.

A risk assessment should:

- ensure significant risks and hazards are addressed
- ensure all aspects of the work activity are reviewed
- take account of non - routine operations e.g. maintenance, cleaning operations etc.
- be systematic identifying hazards and looking at risks
- take account of the way work is being organised and the effects this can have on health
- take account of the risks to visitors and contractors

- account should be taken of young persons and new and expectant mothers when carrying out risk assessments and identify the preventive and protective measures that are required.

Control Measures

When considering what control measures are required the following steps can be used in ranking order:

- eliminate the risk
- substitution (*replacing existing chemical/substance with a safer alternative*)
- prevention (*the use of fixed guards etc.*)
- safe system of work
- written working procedures
- information, instruction and training
- supervision
- PPE (personal protective equipment)

It may be necessary to combined several control methods in order to reduce the risks to an acceptable level.

Note: PPE should only be used as a last resort after considering all other control methods. PPE can also be used to protect against any residual risks that remain after other control methods have been employed.

Attached is a revised General Risk Assessment Form.

For further information about risk assessment and risk assessment procedures contact the School's Health and Safety Officer on ext.1424 or email g.robertson@gsa.ac.uk

The Glasgow School of Art Health and Safety Management: Policy and Organisational Arrangements can be found on the GSA Intranet Website at: <http://intranet.gsa.ac.uk>

Typical risks that require a formal Risk Assessment

Hazardous substances (COSHH)	Lead
Noise	Manual Handling
Display Screen Equipment (DSE)	Dangerous Substances & Explosive Atmospheres (DSEAR)
Person Protective Equipment (PPE)	Asbestos Work & Premises
Fire Precautions	Machinery
Vibration	Heights

Guidance for use with general risk assessment form

This guidance relates to the boxes that make up the general risk assessment form. Each box is numbered

Box 1

The Identification number is assigned by the person completing the form and is simply a reference number to improve record keeping and allow cross referencing.

Box 2

Department where the activity or process is carried out.

Box 3

Date when the assessment was written: This will also indicate when the next review date is due, normally no later than 12 months dependant upon the level of risk. The higher the risk the more frequent the reviews will take place.

Box 4

The work activity/work process description should be as comprehensive as possible. A comprehensive description will cut down the need to repeat the risk assessment for different conditions and prompt the assessor when identifying risks.

Box 5

Specific location of task should indicate the room, area, department or building where the task is to be carried out.

Box 6

Hazards and associated risks should be a comprehensive description and will have highlighted all the significant hazards and risks. They should be summarised here.

- A hazard is anything with the potential to cause harm i.e. working at height, electricity, equipment, chemical or process.
- A risk is the likelihood of that harm occurring. The matrix below can be used to determine the level of risk and guide required actions.
- Descriptions can be narrative or bullet point
- They should reflect what actually happens rather than what should happen if everything is perfect.

The description should include the following:

- People involved
- Equipment used
- Time and place, including any foreseeable variations in conditions
e.g. weather, light level, physical environment
- Substances used or generated, including waste products

Box 7

Who is at risk?, completing this box will involve a list of everyone and everything that can be harmed, damaged or at risk, and can include yourself, other students and staff, members of the public, visitors, contractors, or the equipment, machinery and the environment.

- It is important to let people responsible for applying control measures know that this is required of them.
- A safe system of work is almost always necessary
- The risk assessment must be accepted by the manager of the area. The person signing off the assessment shouldn't change the assessment or conclusion unless they are factually correct.

Box 8.

Existing control measures should correspond with the list of hazards and risks identifies in Box 6 and 7.

- Existing controls should be listed. They should be considered when assessing the risks involved in carrying out a task.
- If a control measure is in place but is not effective it should be noted here. Control measures might be ineffective for a number of reasons for example;
 - They might be awkward and therefore ignored by staff, often true of PPE.
 - They might make the job more complicated and time consuming
 - Staff supervision is poor and the enforcement of control measures lacking.
- When a control measure has been identified it is a requirement that people shall follow them and not have a choice. If a control measure proves to be unworkable or it is possible to improve a control measure then they can be changed, preferably in consultation with staff and students.
- If control measures are adequate and follow the principles of protection there is probably no reason for changing them or imposing additional measures. If they aren't then additional control measures are required. If, even with the introduction of additional control measures the task is still too risky it should not be carried out.

Box 9.

Linked references or assessments, can be used to cross reference other risk assessments that are associated with the same task or process. For example where a chemical process is undertaken, there will be a requirement for a COSHH risk assessment, however to carry out the task there may also be some manual handling activity associated with the process. Here you will have an opportunity to cross reference the manual handling assessment.

You may also link any technical reference, British Standard, operator instructions or safe system of work that has been established for the task,

process or equipment to be used. You may also wish to reference any environmental aspects to be considered.

Box 10.

Overall category of risk:

This is an opportunity to define your findings into three categories of overall risk.

Low, being an acceptable risk, meaning that all the identified hazards and associated risks are adequately controlled, existing control measures are appropriate for the hazards and you have recorded in a formal manner that the task or process can be carried out in a safe and efficient manner.

Medium, being a tolerable risk, the activity or process can continue, however additional control measures may still be required to reduce the risk further, either when additional training is carried out or new and more efficient equipment is introduced in the future. When the next review for the assessment is carried out, these issues can be revisited and additional control measures considered.

High, being completely unacceptable and additional control measures must be introduced in relation to the degree of risk, prior to the activity or process proceeding. The aim is to reduce the risk as far as possible and drive down the likelihood of an accident/incident or near miss incident.

- Risk rating is quite subjective, the scoring matrix, (see below) is for guidance only as are the time frames for action. If the risk assessment results in additional control measures the change in risk level should be assessed. This should be done before the changes are made to illustrate the benefits of changing existing control measures or introducing new ones. If there are no changes to be made the re-scoring won't be necessary and this should be indicated in this box.
- The risk rating should reflect the highest risk rating from box 6.

Risk Analysis Matrix:

Sometimes called a Risk Rating, is used to show in a quantitative manner the level of risk with any activity or process. It is good practice to begin by assessing the numerical level of risk using this matrix at box 6 and write down a figure before any considerations for any control measures are taken into account.

Once any existing control measures and/or any additional control measures are introduced you can recalculate this matrix number and dependant upon the value you have decided, the numerical figure should be lower than when you began? In this manner you can formally demonstrate in a quantitative manner that you have considered all the variables, hazards and risks and have reduced to an acceptable level the potential for an accident/incident or environmental incident. This section is in addition to, but not to replace the low, medium or high category of risk, which is the main indicator of overall level of risk measurement. It is normal to use the formula Likelihood X Severity to reach a final single figure. The higher the number shown, the greater the likelihood with greater subsequent consequences of an accident/incident.

Box 11.

Additional control measures:

- Additional control measures will be required if the risks are not adequately controlled or if the existing control measures are at the lower end of the hierarchy of control measures i.e. training and PPE. Alternative control measures nearer to the top of the hierarchy of control measures and best practice are practicable and desirable.
- If additional control measures cannot reduce the risk to an acceptable level the task should not be carried out. Date and sign when completed.

Note: Hierarchy of control measures refers to where a risk assessment has identified hazards that require control, and can be applied to all hazards as follows:

- eliminate the risk
- substitution (*replacing existing chemical/substance with a safer alternative*)
- prevention (*the use of fixed guards etc.*)
- safe system of work
- written working procedures
- information, instruction and training
- supervision
- PPE (personal protective equipment)

Box 12.

The name of the competent assessor must be provided with a signature and date. To carry out a formal risk assessment the risk assessor must have had formal training and be knowledgeable about the machinery, process or activity being assessed.

Box 13.

Line Manager/Tutor:

This relates to the person in charge of the activity, process or area where the hazardous activity will take place and can be the Technician, Tutor, Manager or Head of Department or School. Include a contact number.

Box 14.

Assessment communicated to the workforce/students:

This can be achieved during an awareness training or operator induction.

Health, Safety and Environmental Risk Assessment

1. RISK ASSESSMENT NO:	2. DEPARTMENT:	3. DATE:
4. WORK ACTIVITY/WORK PROCESS:	5. SPECIFIC LOCATION OF TASK:	
6. HAZARDS AND ASSOCIATED RISKS:		
7. AT RISK: <i>(Persons, environment, plant, equipment etc.)</i>		
8. EXISTING CONTROL MEASURES: <i>(To correspond with hazard / risks identified in section 6)</i>		
9. LINKED REFERENCES OR ASSESSMENTS:		
10. OVERALL CATEGORY OF RISK: <i>(*Delete as appropriate)</i>	*HIGH (Unacceptable)	*MEDIUM (Tolerable)
11. ADDITIONAL CONTROL MEASURES REQUIRED: <i>(To include COSHH, Manual Handling, Noise, Working at Height etc if appropriate)</i>	(Sign when Complete) Date Completed:	
12. ASSESSOR'S NAME:	Signature :	Date:
13. LINE MANAGER/TECHNICIAN/TUTOR:	Name & Contact Number:	
14. ASSESSMENT COMMUNICATED TO STAFF/STUDENTS:	Signature:	Date:

RISK ANALYSIS MATRIX

LIKELIHOOD INDEX	
No.	Index Description
5	Highly Probable
4	Probable
3	Possible
2	Unlikely
1	Highly Unlikely

USE **EITHER** SEVERITY OR ENVIROMENTAL INDEX FOR HAZARDS BUT **NOT** BOTH

SEVERITY INDEX		ENVIROMENTAL INDEX	
No.	Index Description for Effects on People	Index Description for Environmental affects	No.
5	Death	Major Consequence	5
4	Major Injury	High Consequence	4
3	Unfit for Normal Duties for More Than 3 Days	Moderate Consequence	3
2	Unfit for Normal Duties for Less Than 3 Days	Limited Consequence	2
1	Minor Injury	Minimal Consequence	1

OVERALL RISK INDEX (Based on Likelihood X Severity)						
		SEVERITY INDEX				
		1	2	3	4	5
LIKELIHOOD INDEX	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5

HIGH	<p>High Risk Unacceptable</p> <p>Immediate additional control measures must be introduced to reduce the degree of risk prior to the activity/ process proceeding</p>	MEDIUM	<p>Medium Risk Tolerable</p> <p>The activity/process can continue, but additional controls may need to be introduced to reduce risk further</p>	LOW	<p>Low Risk - Acceptable</p> <p>Risk is being adequately controlled; no further control measures are required</p>
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