

<b>Policy hierarchy link</b>	<a href="#">Work Health and Safety Act 2011</a> <a href="#">Work Health and Safety Regulation 2011</a> <a href="#">Work Health and Safety Policy</a> Code of Practice How to Manage Work Health and Safety Risks		
<b>Responsible officer</b>	Director, UNSW Safety and Sustainability		
<b>Contact officer</b>	Manager, UNSW Health & Safety		
<b>Superseded documents</b>	OHS329 OHS Risk assessment and control procedure V4.1 HS329 Risk Management Procedure V5.3		
<b>File number</b>	2015/20434		
<b>Associated documents</b>	HS017 Risk Management Form HS026 Safe Work Procedure Form HS653 Hazard and Risk Register Template HS730 Legislative Compliance Guideline SafeSys Health and Safety Forms		
<b>Version</b>	<b>Authorised by</b>	<b>Approval Date</b>	<b>Effective Date</b>
5.4	Director, UNSW Safety and Sustainability	8 February 2016	8 February 2016

1. Purpose and Scope .....	1
2. Definitions .....	1
3. Procedure.....	2
3.1 When to carry out risk management.....	2
3.2 Who should carry out risk management? .....	2
3.3 Difference between risk management and Safe Work Procedure (SWP) .....	3
3.4 The step-by-step process.....	3
3.4.1 STEP1 – IDENTIFY HAZARDS.....	4
3.4.2 STEP 2 – ASSESS THE RISKS.....	4
3.4.3 STEP 3 – CONTROL THE RISKS.....	5
3.4.4 STEP 4 – REVIEW.....	7
3.5 Hazard and risk register .....	7
3.6 Record keeping .....	8
4. Review and history .....	8
Appendix A. Risk Rating Matrix .....	10

## 1. Purpose and Scope

The Risk Management Procedure outlines how UNSW will comply with its legal requirement under the Workplace Health and Safety Act and Regulation 2011 to identify hazards and control risks arising from its activities. This procedure ensures that there is a consistent approach across the university.

This procedure applies to all activities undertaken by UNSW staff and students. Other workers such as contractors, service operators etc may comply with their own company’s risk management procedure but there must be co-operation and co-ordination between UNSW and all other businesses or undertakings that are impacted.

## 2. Definitions

**Hazard:** A hazard is a situation or thing that has the potential to harm a person, property or the environment.

**Risk:** A risk is the consequence and likelihood of harm occurring when exposed to the hazard.

**Likelihood:** The chance of the harm occurring, taking into account many factors e.g. How often task is undertaken, how long is the exposure to harm, 2behavior of workers, history of harm happening etc.

**Consequence:** The outcome of harm that could result, taking into account many factors e.g. the severity of injury that could occur, how many people could be affected, the possibility of an event escalating, other influencing factors such as height of fall or concentration of harmful substance.

**Risk rating:** The process of measuring the harm from the risk in order to help with prioritizing actions. The severity of the harm (e.g. '*may require hospitalization*') and the likelihood of that harm occurring (e.g. '*Almost certain*') determines the risk rating.

**Risk control:** Action taken to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimizing the risks so far as is reasonably practicable.

**Reasonably practicable:** Doing what is effective and possible to ensure the health and safety of workers and others. Taking into account the likelihood of the harm occurring and degree of harm, the knowledge of the hazard and ways of eliminating or minimizing it, the availability and suitability of controls and the cost associated with controls, including whether cost is grossly disproportionate to the risk.

### 3. Procedure

#### 3.1 When to carry out risk management

Risk management needs to be carried out when:

- Tasks involve risks;
- The legislation requires it;
- Using new equipment or substances;
- There is a change to existing work practices;
- A new risk becomes known;
- An incident has happened;
- There is a change in legislation.

It is always easier to design out a risk at the beginning rather than implementing expensive changes, therefore, the earlier risk management is completed the better.

During risk management it is important to consider the safety of workers when working at workplaces not under the control of UNSW e.g. hospitals, fieldwork, work vehicles since UNSW is still responsible for the work activities undertaken.

#### 3.2 Who should carry out risk management?

Supervisors maintain responsibility for health and safety hazards in the area(s) under their control. Supervisors can delegate the task of completing the risk management form to other members of staff or PhD students, so long as the person they choose has:

- a) completed the health and safety awareness on-line training course (or any other UNSW training course which provides instruction in principles of risk management); **and**
- b) demonstrated an understanding of the risk management procedure; **and**
- c) experience in the particular work area or equipment.

Supervisors who have the authority to implement the necessary safety controls in the area where the task or activity is undertaken maintain responsibility for the process and must sign off on the risk management form.

Where there are multiple supervisors in a shared area then the document must be signed by all supervisors and shared with all staff.

All risk management forms must be authorized by the supervisor unless they exist as reference material or as shared resources (such as All UNSW items in SafeSys).

### 3.3 Difference between risk management and Safe Work Procedure (SWP)

Risk management is used for a process or area that may encompass many hazards and pieces of equipment e.g. managing the risks of a research project, or an office space, or a noisy environment. This is used to identify all the hazards and consider how each one can be eliminated or controlled. Workers sign (physically or electronically) the risk management form as confirmation that they are aware of and understand the risks.

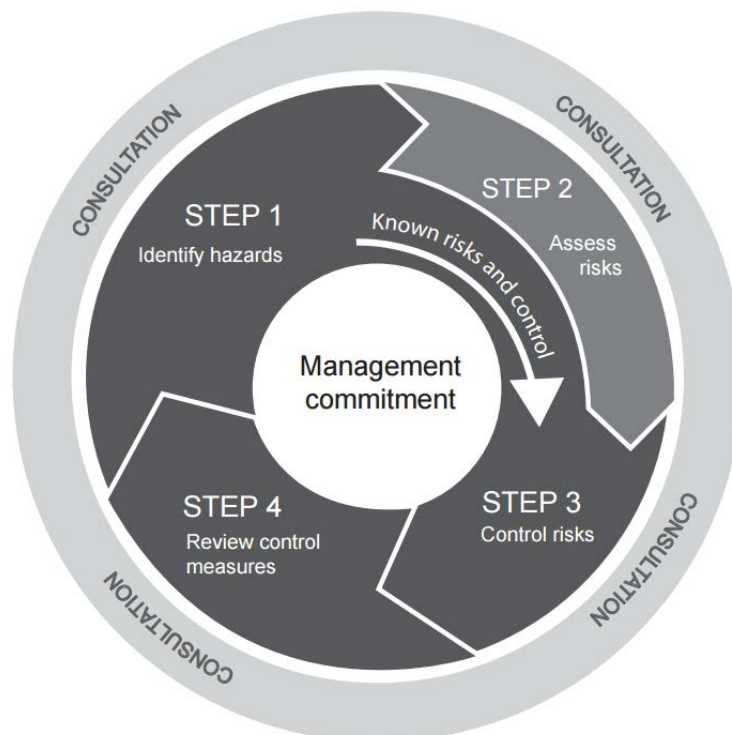
A safe work procedure is an administrative control measure usually identified in the risk management process. It is used to provide specific step-by-step instructions for complex processes, products and projects, for example how to operate a machine, how to weigh out a hazardous chemical. These are used as a practical tool to train and instruct workers. Workers sign the SWP as confirmation that they understand the procedure.

### 3.4 The step-by-step process

The risk management procedure follows 4 steps; the second step being optional depending on the situation.

1. Identify the hazards;
2. Assess the risks;
3. Control the risks;
4. Review control measures.

**Figure 1: The risk management process**



### 3.4.1 STEP1 – IDENTIFY HAZARDS

Hazards can be visible or invisible, obvious or hidden; therefore it is important to use a number of methods to find hazards, such as:

- Ask the workers – these are the people who come into contact with hazards every day;
- Inspect the area – this will help identify obvious hazards;
- Look at the environment – noise, extreme temperatures, work at height, moving vehicles;
- Look at the equipment, materials, substances used – moving parts, sharps, chemicals, biological agents, radiation;
- Look at the tasks and how they are performed – repetitive, twisting, lifting etc.
- Consider the organization and management of the work – stress, fatigue, violence, potential emergencies;
- Read the literature – Common workplace activities already have well established identified hazards and controls; check the relevant section in the [Work Health and Safety Regulation](#) as well as guidance material from SafeWork NSW Codes of Practice (CoP), Australian Standards, manufacturer's literature, Safety Data Sheets, etc.;
- Check the statistics – look at where hazards or incidents are reported or are there any trends in sickness absence.
- Consider potential emergencies – what could go wrong?

Consider all the people who could be affected by the work e.g. staff, contractors, students, visitors, members of the community. In a UNSW workshop, staff and students in the vicinity of that work may be at risk. On field trips other participants may be at risk, for instance passers-by.

You will need to consult with persons that could be affected by your work about the hazards and how they could be affected by them. This can be done through your local Consultation Committee or at team meetings or group forums.

All identified hazards must be documented; the risk management form may be used for this.

### 3.4.2 STEP 2 – ASSESS THE RISKS

This step is not necessary if the assessment has already been done by the existence of a Code of Practice, Australian Standard, Safety Data Sheet or other authoritative source document. These pre-assess the risk with suggested controls to make it as low as reasonably practicable. In this case, skip this step and go straight to implementation of controls outlined in the source document.

Rating the risk helps to prioritise the implementation of control measures e.g. if an assessment identifies a trip hazard as low and a fire hazard as very high, then controlling the fire hazard is given priority. To identify the risk rating: consider what the consequences and likelihood would be.

#### Consequences

When estimating the consequences of harm from each hazard consider:

- What type of harm will occur (e.g. strain, psychological harm, laceration, burn, amputation, death);
- What will influence the severity of harm (e.g. distance of a fall);
- How many people are exposed (e.g. a crane collapse on a busy road will be more severe than a collapse in a remote location due to the number of people who could be harmed);
- Could one failure lead to another (e.g. failure of electrical supply will stop local exhaust ventilation);
- Could it escalate to a more serious event (e.g. a small fire could get out of control in an area where there is a lot of combustible material).

#### Likelihood

When estimating the likelihood of harm occurring consider:

- How often is there exposure (e.g. once a day/once a month);
- How long are people exposed to the hazard (e.g. 5 minutes or several hours);

- How close are people to the hazard (e.g. there may be a moving part but people don't go near it);
- Could any changes increase the likelihood (e.g. deadlines causing people to rush);
- Does the environment affect the hazard (e.g. very poor lighting);
- What are the behaviours or attitudes of the people exposed (e.g. young people may be less risk-aware, or shift-workers may be fatigued);
- Has it caused an injury, illness, disease in the past, at UNSW or elsewhere;
- How effective are current control measures.

Once you have determined the consequence and likelihood use the matrix in appendix A to calculate the risk as low, medium, high or very high. Consider that the risk rating may vary if there is a change of circumstances for the task (such as working after hours. The activity must not continue if the risk rating is very high. In this case appropriate additional risk controls must be put in place to reduce the risk.

### 3.4.3 STEP 3 – CONTROL THE RISKS

Hazards should be eliminated. Where this is not possible the risk should be controlled as far as is reasonably practicable.

How to identify what control measures are needed:

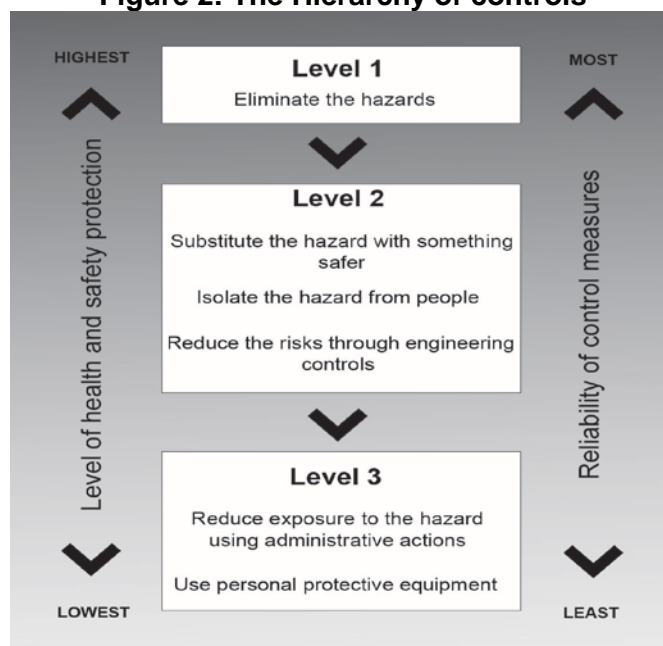
1. Check if there is legislation that has specific requirements for a control measure;
2. Check if a Code of Practice(CoP) has any guidance on controlling the hazard;
3. Check if there is a relevant Australian Standard on the topic;
4. Check the manufacturers guidance and/or any industry standards;
5. Check with other Faculties and/or businesses if they have a similar hazard and how they have successfully controlled it;
6. Ask the workers if they have any solutions to the hazards they face.
7. Seek advice from Health and Safety and/or Human Resources professionals

When deciding to implement control measures, you must consult with workers to make sure that the controls are suitable, as workers will know the task/area best and will have to work with the control measure on a day-to-day basis.

#### Hierarchy of controls

The WHS regulations require duty holders to follow this hierarchy when managing risk.

**Figure 2: The Hierarchy of controls**



#### **Level 1**

- Eliminate the hazard; this is the most effective way of managing risk e.g. use remote handling tools to eliminate working at height

It is not always possible to eliminate a hazard if it means that you cannot deliver a service or carry out a mandatory task. In this case, eliminate as many risks associated with the hazard as possible, and then you can proceed to the next level.

### Level 2

- Substitute the hazard with something safer e.g. replace a corrosive chemical with a non-hazardous substance.
- Isolate the hazard from people e.g., access control in place.
- Use engineering controls e.g. use local exhaust ventilation to extract dust away from the worker; use a hoist to lift a heavy load.

### Level 3

This level does not control the hazard at source, it relies on human behavior which, on its own, tends to be least effective; humans make mistakes for a wide variety of reasons.

- Administrative controls. For example Training courses, signage, Safe Work Procedures (SWP), supervision. These controls help to inform and reaffirm hazard awareness.
- Personal protective equipment (PPE) e.g. gloves, safety goggles.

Level 3 controls can be used to supplement the higher levels of controls but should only be used alone when higher levels are not reasonably practicable or as an interim measure until higher levels can be implemented. For example, if there is a noise source ear plugs can be used while the equipment is being serviced or until a sound-control booth has been purchased.

### Cost of controls

In some cases the legislation specifically requires a control measure so it must be implemented regardless of the cost. For example, workers who are frequently required to wear hearing protectors in noisy areas have to undergo audiometric testing, regardless of the cost of the test.

If a CoP or Australian Standard specifies a control measure then it must be implemented, unless you choose something of equal or better effectiveness.

In all other cases the cost, in terms of: time; effort; and money; of implementing a control may be taken into account when deciding whether it's reasonably practicable. However, cost alone cannot be used as a reason for doing nothing.

**Figure 3: How to determine what is reasonably practicable**



### Prioritisation of controls

The level of risk is assessed and used to prioritise the implementation of risk control measures. The higher the level of risk, the more urgent the action to be taken. Priority needs to be given to those risks at the more serious end of the scale, but you should work towards how and when all the risks will be reduced to an acceptable level.

All additional control measures to be implemented need to be prioritised based on the risk. They can be added as a corrective action(s) in the online hazard and incident reporting system to track to completion.

#### Maintain effectiveness of controls

In order to ensure that your controls continue to work once the risk management process has been completed and signed off, you should do the following:

- Clearly allocate accountability:
- Regularly inspect, test and repair plant and equipment:
- Keep training up-to-date:
- Keep up-to-date on new technologies or hazard information that may change:
- Consult with workers about whether controls are still effective.

#### Final consultation

You must inform and discuss the hazards and controls with all people that may be reasonably expected to be affected by the work. The completed risk management form can be used as a tool in this process, as it will help them to gain an understanding of why certain controls are in place. Have these people sign (physically or electronically) the form as a record of this process.

For activities which are low risk or include a large group of people (for example open days, BBQ's and student classes etc) only the persons undertaking and/or coordinating the key activities in the process need to sign the acknowledgement of understanding part of the form. For all others involved in such activities, e.g. students in a class, the information can be covered by other methods including, for example, a safety briefing, induction and/or safety information sheet.

### **3.4.4 STEP 4 – REVIEW**

You must review your risk management procedures:

- When controls are not working effectively (or to review effectiveness of controls);
- When there is a change in the workplace that can impact on the controls;
- If there is a new hazard identified;
- If consultation with workers or others indicates a review is necessary;
- If a health and safety representative requests a review;
- If new information on a hazard becomes available;
- If there is a change in relevant legislation, standards, codes of practice, agreements, guideline, procedure;
- On a regular basis (this will depend on the level of the risk, more serious risks should be reviewed more regularly).

To undertake a review, start at step 1 (identify the hazards) again and continue through the rest of the risk management process.

If the risk management form requires a significant update ensure that you re-educate all the previous people who signed off on the original form along with any new people, as necessary.

## **3.5 Hazard and risk register**

A hazard and risk register should list all hazards identified for the area associated with activities, processes, products, services and environment to establish a risk profile. This can be generated from Risk Management Forms and other hazard identification sources. SafeSys or HS653 can be used for documenting this register.

### 3.6 Record keeping

Records should be kept of all identified hazards; this can be done using the UNSW risk management form, SafeSys, hazard and risk register or other suitable means.

Risk Management Forms should include the following:

- Document control and review (as per [HS311 Document control procedure](#))
- Document author
- Document approver (i.e. responsible person)
- Description of activity
- Description of location
- Who may be at risk from the activity
- How persons at risk from the activity have been consulted on the risk
- Reference legislation, standards, codes of practice, SDS, etc
- Identify task
- Identify hazard
- Identify harm
- Identify existing controls
- Identify any additional controls, if needed
- Risk rating of hazards
- Clean-up and waste disposal
- Emergency shut-down procedures
- Format for ensuring individuals performing the tasks declare that they have read and understood the content.

The reasons for documenting include:

- Helps to induct and train staff on the hazards;
- Helps to ensure that you have identified all the hazards;
- Demonstrates how decisions are made;
- Identifies when a safe work procedure is necessary;
- Demonstrates that risks are being managed;
- Can be used as evidence in criminal and civil prosecutions;
- Demonstrates potential compliance with the WHS Act and Regulations.

Other ways of documenting how a risk is managed is through keeping minutes of discussions at team meetings or one-to-one meetings or emails.

#### Duration

For records that do not require health monitoring: keep for 7 years after the document is no longer used.

For records that require health monitoring: keep for 30 years.

## 4. Review and history

The authorisation and amendment history for this document must be listed in the following table. Refer to information about [Version Control](#) on the Policy website.

Version	Authorised by	Approval Date	Effective Date	Sections modified
1.0	Director, Human Resources	05/2003	05/2003	Previous OHSMS document
2.0	Director, Human Resources	1/1/2007	1/1/2007	New document
2.1	Director, Human Resources		8/6/2007	Concise Risk Rating table added



		8/6/2007		as Appendix 4
2.2	Director, Human Resources	27/6/2007	27/6/2007	Risk assessment review added
3.0	Director, Human Resources	19/11/2010	19/11/2010	Complete review of the document
4.0	Director, Human Resources	3/03/2011	3/03/2011	Sign off added, emergency situations added and manual handling risk identification added
4.1	Manager, OHS Unit	22/06/2011	22/06/2011	Additional information added to 3.1.12
5.0	Director, Human Resources	04/09/2012	04/09/2012	Document changed to reflect new WHS Act, Regulation and Code of Practice
5.1	Director, Human Resources	23/04/2013	23/04/2013	Updated Branding Logo in accordance with UNSW Branding Guidelines.  Modified the document identifier from OHS to HS in accordance with WHS legislation review
5.2	Director, Human Resources	6 June 2013	6 /6/ 2013	Updated s3.2 to make provision for recognition of prior learning
5.3	Director, UNSW Safety and Sustainability	30 April 2014	30 April 2014	Reviewed for administrative updates
5.4	Director, UNSW Safety and Sustainability	8 February 2016	8 February 2016	3.1 Added consideration of workplaces not under control of UNSW. 3.4.2 Made clear you don't have to complete Step 2 if an assessment has already been done. 3.4.3 Explained prioritization of control measures 3.5 Added what should be in a RMF 3.5 Added need for Hazard and Risk register (replacing HS304 Hazard and Risk Register Procedure) Added reference to SafeSys.

## Appendix A. Risk Rating Matrix

RISK RATING METHODOLOGY AND MATRIX																																															
<b>Consider the Consequences</b>	<b>Consider the Likelihood</b>	<b>Calculate the Risk</b>																																													
Consider: What type of harm could occur (minor, serious, death)? Is there anything that will influence the severity (e.g. proximity to hazard, person involved in task etc.). How many people are exposed to the hazard? Could one failure lead to other failures? Could a small event escalate?	Consider: How often is the task done? Has an accident happened before (here or at another workplace)? How long are people exposed? How effective are the control measures? Does the environment effect it (e.g. lighting/temperature/pace)? What are people's behaviours (e.g. stress, panic, deadlines) What people are exposed (e.g. disabled, young workers etc.)?	1. Take the consequences rating and select the correct column 2. Take the likelihood rating and select the correct row 3. Select the risk rating where the two ratings cross on the matrix below.  <b>VH = Very high, H = High, M = Medium, L = Low</b>																																													
<p><b>5. Severe:</b> death or permanent disability to one or more persons</p> <p><b>4. Major:</b> hospital admission required</p> <p><b>3. Moderate:</b> medical treatment required</p> <p><b>2. Minor:</b> first aid required</p> <p><b>1. Insignificant:</b> injuries not requiring first aid</p>	<p><b>A. Almost certain:</b> expected to occur in most circumstances</p> <p><b>B. Likely:</b> will probably occur in most circumstances</p> <p><b>C. Possible:</b> might occur occasionally</p> <p><b>D. Unlikely:</b> could happen at some time</p> <p><b>E. Rare:</b> may happen only in exceptional circumstances</p>	<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="5">CONSEQUENCES</th> </tr> <tr> <th colspan="2"></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <th rowspan="5">LIKELIHOOD</th> <th>A</th> <td>M</td> <td>H</td> <td>H</td> <td>VH</td> <td>VH</td> </tr> <tr> <th>B</th> <td>M</td> <td>M</td> <td>H</td> <td>H</td> <td>VH</td> </tr> <tr> <th>C</th> <td>L</td> <td>M</td> <td>H</td> <td>H</td> <td>VH</td> </tr> <tr> <th>D</th> <td>L</td> <td>L</td> <td>M</td> <td>M</td> <td>H</td> </tr> <tr> <th>E</th> <td>L</td> <td>L</td> <td>M</td> <td>M</td> <td>M</td> </tr> </tbody> </table>			CONSEQUENCES							1	2	3	4	5	LIKELIHOOD	A	M	H	H	VH	VH	B	M	M	H	H	VH	C	L	M	H	H	VH	D	L	L	M	M	H	E	L	L	M	M	M
		CONSEQUENCES																																													
		1	2	3	4	5																																									
LIKELIHOOD	A	M	H	H	VH	VH																																									
	B	M	M	H	H	VH																																									
	C	L	M	H	H	VH																																									
	D	L	L	M	M	H																																									
	E	L	L	M	M	M																																									

Risk level	Required action
<b>Very high</b>	<b>Act immediately:</b> The proposed task or process activity must not proceed. Steps must be taken to lower the risk level to as low as reasonably practicable using the hierarchy of risk controls
<b>High</b>	<b>Act today:</b> The proposed activity can only proceed, provided that: (i) the risk level has been reduced to as low as reasonably practicable using the hierarchy of risk controls and (ii) the risk controls must include those identified in legislation, Australian Standards, Codes of Practice etc. and (iii) the document has been reviewed and approved by the Supervisor and (iv) a Safe Working Procedure or Safe Work Method has been prepared and (v) the supervisor must review and document the effectiveness of the implemented risk controls
<b>Medium</b>	<b>Act this week:</b> The proposed task or process can proceed, provided that: (i) the risk level has been reduced to as low as reasonably practicable using the hierarchy of controls and (ii) the document has been reviewed and approved by the Supervisor and (iii) a Safe Working Procedure or Safe Work Method has been prepared.
<b>Low</b>	<b>Act this month:</b> Managed by local documented routine procedures which must include application of the hierarchy of controls.