



## **TUS GENERIC RISK ASSESSMENT GUIDANCE**

A Guidance Document prepared to support TUS Units (e.g. Faculties, Departments, Research Institutes, & Campus Companies) understanding and undertaking Risk Assessments

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## **INTRODUCTION**

This guidance document was prepared to communicate to management and staff the risk assessment approach TUS recommends for risk assessing generic work activities throughout the University.

Please note that a risk assessment is only effective if you and your staff act on it. You must follow through with any actions required and review it on a regular basis.

## **RISK ASSESSMENT GUIDANCE, PROCESS & TEMPLATES**

The following sections of this document present provide guidance on undertaking risk assessments for many of the generic work activities or tasks performed throughout TUS. However, this guidance is not intended to cover specific or detailed requirements (e.g. legal requirements, regulations) associated with items such as Chemical Agents, Biological Agents or Compressed Gases, and in such cases where these hazards are identified, the reader should refer to the TUS Parent Safety Statement for further information on the associated TUS policies and requirements.

The steps below set out the process to follow to undertake a Risk Assessment for TUS generic work activities (e.g. operating equipment, organising an event, Student Tour of facility, etc...): -

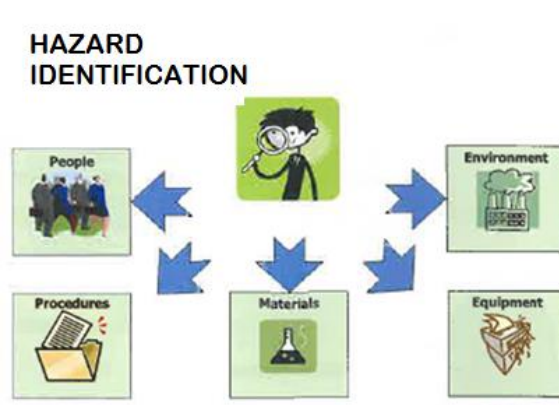
- Step 1 - Identifying the Hazards
- Step 2 - Evaluating the Risk
- Step 3 - Control Measures Explained
- Step 4 - Responsibilities for Risk Assessment, Monitor and Review
- Step 5 – RISK ASSESSMENT TEMPLATE (Blank form for use by any member of staff).
- Step 6 - Recommendation (a template for managing the implementation & recording the status of needed control measures).
- Step 7 - Sample Completed Risk Assessment Template & Recommendation Template

## Step 1 – Identify the Hazards

The recognised definition of a hazard is “Something with the potential to cause harm”. Consider what hazards are present in the work area (e.g. Laboratory) where the work activity is being performed, (e.g. the activity might be operating a piece of equipment). The table below presents categories of hazard and examples of specific hazards under each category.

Category	Examples
Physical Hazards	<i>Manual Handling, Working at height, operating equipment, slips, trips, falls, fire, electricity, internal transport, housekeeping</i>
Health Hazards	<i>Noise, dust, lighting, vibration radiation, extremes of temperature ergonomics....</i>
Chemical Hazards	<i>Hazardous chemicals and substances</i>
Biological Hazards	<i>Viruses, bacteria, fungi</i>
Human Factors	<i>Young workers, pregnant employees, competence, lone working, supervision levels, stress, bullying and harassment</i>

Although a non-exhaustive list, it is useful in giving an individual enough information to know where to begin in identifying hazards. To ensure that as many hazards are identified as possible, look at all possible sources of information within the workplace (e.g. see the workplace Hazard Identification diagram below).



If, for example you are undertaking a risk assessment of a specific work activity in a new/refurbished facility/laboratory, the potential hazards may be numerous and so categorising them will support the Risk Assessment process.

The hazard identification category checklist table below could be used as a checklist or aide memoir to use while identifying the hazards associated with a particular task and which need assessment.

Category of Potential Hazard	Potential Hazards (Examples)	Assessment required ?
<b>Physical Hazards</b> - (e.g. Manual Handling, Working at height, equipment, slips, trips, falls, fire, electricity,internal transport, housekeeping...)		
Equipment	Operator operating Equipment	
Equipment	Operating (running)	
Equipment	Electrical	
Equipment	Hot Surfaces	
Equipment	Mechanical	
Equipment	Circulation Routes around the equipment Slips, Trips, Falls	
<b>Health Hazards</b> - (e.g. Noise, dust, lighting, vibration, radiation, extremes of temperature, ergonomics...)		
Environment	Noise from machinery operating in Laboratory/ workshop	
Environment	Hot surfaces in Boiler Room	
Environment	Fumes from equipment operating	
Environment	Emergency Lighting	
Environment	Vibration	
<b>Materials</b> - (e.g. Chemical Hazards; Hazardous chemicals & substances. Biological Hazards: Virus, Bacteria, Fungi..)		
Materials	Chemical Cleaners	
Materials	Biological samples	
<b>Human Factors</b> - (e.g. Young workers/students, Pregnant employees/students, competence, lone working, supervision levels, stress, bullying & Harassment)		
Human Factors	Competence of Student to operate equipment	

## Step 2 – Evaluating the Risk

The hazards associated with an activity can be common across many workplaces. For example, an employee climbing a ladder, will in many cases be exposed to a similar if not a common set of hazards. However the risk will vary for each use of the ladder depending on where it is used. Two factors considered in the assessment of risk, are, i) What is the likelihood, or chance that a hazardous event will occur, for example the chance of an employee falling from the ladder while undertaking a particular activity, against ii) the severity, or extent of harm that may be caused if the event occurs. For example, if the employee was to fall from the ladder, what would be the extent of the injury caused.

A common method for evaluating the risk is to use some form of matrix to put the likelihood and severity into perspective.

For more common hazards, TUS recommends using a simple qualitative 3x 3 matrix to determine the risk classification. This system should be used for the majority of routine university risk assessments but other risk assessment techniques can be used which are more appropriate in certain circumstances, (Note: where there is a need to measure a greater variation of risk a more detailed matrix (e.g. 5x5) may be appropriate).

### Definitions:

<b>Hazard</b>	Means anything that can cause harm, e.g. fire or electricity
<b>Likelihood</b>	a measure of the probability or chance of an event occurring
<b>Severity</b>	The consequence in the case of the event occurring. 3 levels of severity are applied in this matrix system from slightly harmful to extremely harmful
<b>Risk</b>	Means the chance, great or small, that something or someone will be harmed by the hazard.

Risk Matrix (3x3)

Severity \ Likelihood	Slightly Harmful <i>(e.g. Superficial injury or temporary discomfort or distress)</i>	Harmful <i>(e.g. Sprains, minor fractures, ill health leading to disability)</i>	Extremely Harmful <i>(e.g. major fractures, amputations, fatality, life shortening illnesses)</i>
Highly unlikely	LOW (L)	LOW (L)	MEDIUM (M)
Unlikely	LOW (L)	MEDIUM (M)	HIGH (H)
Likely	MEDIUM (M)	HIGH (H)	HIGH (H)

The 3 basic steps to Risk Assessment are:

### 1. Identify the hazards

Anything that has the potential to cause harm, in terms of human injury or ill-health. For example working with chemicals, dangerous substances or dangerous equipment.

### 2. Identify the level of risk for each hazard

Decide who could be harmed and how and give consideration to vulnerable groups e.g. young persons, the elderly, pregnant employees, shift workers etc. (I.e. the chance/likelihood of harm occurring, coupled with how severe the harm or ill health could be).

**3. Identify the controls or improvements that need to be put in place to avoid or reduce the risk.** Your control measures are the most significant part of the risk assessment, as they set out the steps that must be followed to protect people. Some control measures may already be in place. You will need to decide if additional measures are needed. Risk assessment will help you prioritise the high risk hazards first. More information on Hazards and Controls,

## Step 3 – Control Measures Explained

Having evaluated the risks, we need to establish what controls are required to reduce the risk to as low as is reasonably practicable.

A control measure is simply what steps you are going to take to remove a hazard (eliminate) or at least reduce it to a low level (minimise). Your control measures are the most significant part of the risk assessment, as they set out the steps that must be followed to protect people.

Some control measures may already be in place. You will need to decide if additional measures are needed. When deciding on the controls, you should consider the 'general principles of prevention', which are a hierarchy of controls that set out how to manage hazards.

The focus should be to get rid of the hazard, so that people are protected. If this is not possible then you should work through the principles until you have made it as safe as reasonably practicable. Your reliance on personal protective equipment (PPE) should be one of the last steps in the process (not the first).

The General Principles of Prevention are summarised as follows;

### 1. Eliminate or Avoid the risk

If you can get rid of the hazard then people are not exposed to the risks. You should apply this principle first.

### 2. Evaluate unavoidable risks

If you can't get rid of a hazard, you must assess it. This requires you to evaluate the level of risk presented by the Hazard (*i.e. the Probability of the Event Occurring x Severity of Harm caused*).

### 3. Combat the risks at source

Deal with the hazard at its root, e.g. if there is a noisy machine in the workplace, giving employees hearing protection is not dealing with the root of the problem, but if you enclose the machine with sound proofing or if you replace the machine with a quieter one, then you are combating the risk at source.

### 4. Adapt the work to the individual

This is the principle of arranging the workplace and tasks to take into account your employees and to reduce the effect of work on health.

### 5. Adapt your work place in line with technical progress

Safer systems of work are always being developed. You should keep up to date with new systems, so that you can put them into use in your workplace.

### 6. Replace dangerous systems with safer alternatives

This applies to dangerous articles, substances or systems of work. For example, if you are using a solvent that may be toxic, then you should consider if there is a non-solvent alternative that is safer. (*Note: Basic approach - if you can take steps to make it safer, then do it.*)

### 7. Give priority to collective protective measures

It is better to put controls in place that protect everyone, rather than just handing out PPE to employees.

### 8. Develop a prevention policy

Set out how you are going to protect your employees and other people from the hazards in your workplace. This forms part of your safety statement.

### 9. Give training and instruction

Once you have assessed the risks and decided on your controls in line with the principles above, you will need to tell your employees about them and to make sure that they are competent to work safely.

#### **Step 4 – Responsibilities for Risk Assessment, Monitor and Review**

All TUS Unit Managers (e.g. Unit Managers, Deans, Heads of Departments and Campus Company managers) are responsible for ensuring their departments undertake and complete the risk assessment process for identified hazards associated with activities and areas coming under their management control.

Managers should complete the process with the support of their staff. The risk assessments process will immediately benefit from a greater range of experience and judgement when all departmental staff are engaged in the process.

In this way managers and staff can review and better understand the gaps in tasks in relation to health and safety and can both agree on necessary controls.

Once the assessments are complete, record the significant findings and what control measures were put in place to reduce the risk. Identify and record those who are responsible for ensuring control measures are in place and for maintaining the risk to the tolerable level.



## STEP 5 – RISK ASSESSMENT TEMPLATE

<b>TUS Campus Location</b> (Midlands or Midwest) <b>&amp; Location on that Campus:</b>								
<b>TUS Unit Undertaking the Risk Assessment</b> (e.g. Faculty, Department Title/Name) :								
<b>Title and Summary of Unit's Activity/s or Area/s under Assessment</b>								
<b>Risk Assessment by :</b>								
<b>Date of Assessment :</b>								
<b>Risk Assessment review Date:</b>								
<b>The Activity or Task Under Assessment</b>	<b>Person/s associated with the Activity or Task or Area, for Assessment</b> (e.g. Staff, Student, Contractor)	<b>Hazards Identified</b>	<b>Current In place Controls</b>	<b>RISK</b>	<b>REQUIRED CONTROLS TO REDUCE RISK TO ACCEPTABLE LEVEL (to be Implemented)</b>	<b>RESPONSIBLE PERSON/S FOR ACTION</b>	<b>Date Controls Implemented</b>	<b>Residual Risk Rating (RRR)</b>

## STEP 6 – Guidance for TUS Unit’s for Control Measure Implementation

A template to support Unit management to PLAN DO CHECK ACT in relation to implementation of certain Unit Control Measures. It is intended to support implementation of control measures that require significant change management in the Unit, or require additional Unit equipment (e.g. forklift). It is intended to assist the Unit tracking control measure implementation & support demonstrating compliance with H&S.

<b>TUS Unit Control Measure Implementation Template</b>					
<b>Unit Risk Assessment Reference No.</b>	<b>Control Measure for Action</b>	<b>The Planned Action to Implement the Control Measure</b>	<b>Unit Staff member or Manager assigned to executing the planned action</b>	<b>Control Measure Implemented Date</b>	<b>status</b>

### STEP 7 – Sample Complete Risk Assessment Template

<b>TUS Campus Location (Midlands or Midwest) &amp; Location on that Campus:</b>				<i>Midlands Campus Athlone, Main Campus, Engineering &amp; Informatics Building Ground Floor self-contained Boiler Room located at rear of Engineering building Room X100</i>				
<b>TUS Unit Undertaking the Risk Assessment (e.g. Faculty, Department Title/Name) :</b>				<i>Athlone Campus Estates Department</i>				
<b>Title and Summary of Unit's Activity/s or Area/s under Assessment</b>				<i>Faculty of Engineering Students will be touring the boiler room while under the supervision of Faculty lecturer . Demonstration of Equipment operating in the Boiler Room by Estates Department Technical Staff.</i>				
<b>Risk Assessment by :</b>				<i>Athlone Office Estates Department - Plumbing &amp; Electrical Staff</i>				
<b>Date of Assessment :</b>				<i>February 2023</i>				
<b>Risk Assessment review Date:</b>				<i>Annual Review...</i>				
<b>The Activity or Task Under Assessment</b>	<b>Person/s associated with the Activity or Task or Area, for Assessment (e.g. Staff, Student, Contractor)</b>	<b>Hazards Identified</b>	<b>Current In place Controls</b>	<b>RISK</b>	<b>REQUIRED CONTROLS TO REDUCE RISK TO ACCEPTABLE LEVEL (to be Implemented)</b>	<b>RESPONSIBLE PERSON/S FOR ACTION</b>	<b>Date Controls Implemented</b>	<b>Residual Risk Rating (RRR)</b>
Faculty of Engineering Student Tour of Boiler Room  Risk Assessment Reference No: RA1	Estates Staff, Engineering Students and Engineering Lecturer	<b>Heat Producing Appliances &amp; pipework. Hot Surfaces Hazards:</b> Likelihood = Likely Hot water pipework exposed at flanges. Elements of boiler get hot on exposed surfaces. Temp 70-80C max. <i>Severity – Superficial</i>	Pipework is insulated to protect staff from coming into contact with hot objects. But not at Flanges	<b>M</b>	1.HOT SURFACES Warning Signs to be provided at hot water pipes and at Gas Boilers. Estates Department to action.  2. Estates Department Boiler Room Supervisor to supervise Tour. Engineering Lecturer to supervise students on tour.	Estates Department for Signage & Boiler Room Tour Control  Engineering Lecturer for Student Supervision	May 2023	<b>Low</b>

**STEP 8 – Sample Completed- TUS Unit’s Control Measure Implementation Template**

<b>TUS Unit Control Measure Implementation Template</b>					
<b>Unit Risk Assessment Reference No.</b>	<b>Control Measure for Action</b>	<b>The Planned Action to Implement the Control Measure</b>	<b>Unit Staff member or Manager assigned to executing the planned action</b>	<b>Control Measure Implemented Date</b>	<b>status</b>
Boiler Rm. Student Tour RA1	<p><b>Provide new Safety Signage in two areas as follows:</b></p> <p>1. Heat safety warning signs to be provided at hot water pipes and at Gas Boilers.</p> <p>2. .... (Relevant Unit Name) to action the above signage.</p> <p><b><i>See detail of recommendation below in Appendix 2</i></b></p>	Estates to acquire the signage and put in place in identified locations to warn of the hazard	Estates Department Staff will action and inform Engineering Supervisor when in place	March 2023	Complete

## STEP 8 – Sample Complete Recommendation & Action Taken Template

No.	Recommendation	Action Taken	Actioned by (Responsible person)	Implemented on (date)?	status
Boiler Rm.	<p><b>Provide new Safety Signage in two areas as follows:</b></p> <p>1. Heat safety warning signs to be provided at hot water pipes and at Gas Boilers.</p> <p>2. .... (Relevant Unit Name) to action the above signage.</p> <p><b><i>See detail of recommendation below in Appendix 2</i></b></p>	New Signage installed	Boiler Room Supervisor	October 2023	Complete

## References

1. Health and Safety Authority: managing Health and Safety in Schools:  
[http://www.hsa.ie/eng/Education/Managing\\_Safety\\_and\\_Health\\_in\\_Schools/Interactive\\_Risk\\_Assessments\\_%E2%80%93\\_Primary/Tool-4-Risk-Assessment-Templates.pdf](http://www.hsa.ie/eng/Education/Managing_Safety_and_Health_in_Schools/Interactive_Risk_Assessments_%E2%80%93_Primary/Tool-4-Risk-Assessment-Templates.pdf)
2. Health and Safety Authority: Risk Assessments made easy:  
[http://www.hsa.ie/eng/Small\\_Business/Getting\\_Started/Risk\\_Assessments\\_Made\\_Easy/](http://www.hsa.ie/eng/Small_Business/Getting_Started/Risk_Assessments_Made_Easy/)
3. Health and Safety Executive UK: Example risk assessments:  
<http://www.hse.gov.uk/risk/casestudies/>



**TUS**

**Technological University of the Shannon:  
Midlands Midwest**  
Ollscoil Teicneolaíochta na Sionainne:  
Lár Tíre Iarthar Láir

[www.tus.ie](http://www.tus.ie)

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Athlone Campus Health & Safety Office  
Athlone Campus,  
University Road, Athlone,  
Co. Westmeath,  
N37HD68, Ireland.

*Athlone Campus Health and Safety Office  
Phone 09064 42559  
Email: [fergal.sweeney@tus.ie](mailto:fergal.sweeney@tus.ie)  
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# Document Version Information & Revision History

Internal H&S Office Administration, records of any necessary corrections or updates by H&S Office (NOT FOR CIRCULATION \_ REMOVE PRIOR TO DISTRIBUTION)

<b>Internal H&amp;S Office Use Only</b>				
Revisions/Amendments During Policy Development				
Revision Amendment No.	Date Issued	What was Amended/Revised	Revised by	Internal office note; Date of revision
3	Feb 2023	Revision, edits, updates for TUS	FS	Feb 2023
2	For issue	AIT GENERIC RISK ASSESSMENT GUIDANCE Document prepared for web based on the original RA handout	FS	August 2018
1	2015	A handout for Managers which was communicated via email	FS	2015