

# How to Guide: Completing a Risk Assessment

A risk assessment is a tool used to assess what, in your work, could cause harm and how severe that harm may be. They can also help determine whether existing controls are effective, what new control measures to put in place and how urgently action needs to be taken.

This is done by placing values on the **CONSEQUENCE** of exposure to a hazard, the **LIKELIHOOD** that exposure to the hazard will result in that consequence and the frequency or collective attendance of that **EXPOSURE**. A rating of **RISK** is determined by multiplying the values of consequence (C), likelihood (L) and exposure (E).

Risk Assessments are a useful tool to use when planning work, however it is only a piece of paper at the end of the day. A tool by itself doesn't keep you safe, using it effectively does.

UWA has its own General Safety Risk Assessment that should be completed for any new works or activities that involve risk and peer reviewed by someone familiar with the work. It is separated into the following parts:

## PART 1 – ACTIVITY / TASK DESCRIPTION

Overview of the task or activity and name of peer reviewer.

## PART 2 – IDENTIFY HAZARDS, ASSOCIATED RISK RATINGS AND CONTROL STRATEGIES

This section covers the identification of hazards, assessment of risk and proposed controls.

## PART 3 – IMPLEMENTATION / ESCALATION PLAN

This section contains Supervisor and Head of School (or delegate) endorsement as well as the time period for monitoring and review.

## RISK CALCULATOR

Guide providing values for varying levels of CONSEQUENCE, LIKELIHOOD and EXPOSURE

**THE UNIVERSITY OF WESTERN AUSTRALIA** **GENERAL SAFETY RISK ASSESSMENT**

Fill in between fields in black entries by typing into the grey highlighted boxes. When closed numeric fields offer drop-down selections.

**PART 1 – ACTIVITY / TASK DESCRIPTION** Use additional sheets if necessary - Peer check must be by person familiar with the planned activity.

|                                 |                                    |                            |          |                 |
|---------------------------------|------------------------------------|----------------------------|----------|-----------------|
| Location                        | Assessment Date                    | Expiry Date (max. 5 years) | Assessor | Peer checked by |
| Task / Activity / Project Title | How many persons will be involved? |                            |          |                 |

Description (alternatively, a separate METHOD STATEMENT or equipment detailed description may be referenced from here if a copy is attached)

**WORKING CONDITIONS** Describe layout, accessways, physical conditions (e.g. on a public thoroughfare, enclosed room, outside enclosed by barrier), containment (e.g. ventilation, fume cupboards, safety cabinets, open bench-work) and other key factors impacting on the activity/ task.

**Related Documentation / Guidance** this may include referenced articles, legislation, standards or codes which must be specifically highlighted.

Method Statement:   
SOPs (for equipment):   
Other:

**RISK CALCULATOR** - when completing Part 2, refer to the variable definitions to determine Risk Rating and Control Strategies

|  |     |  |     |
|--|-----|--|-----|
| <b>CONSEQUENCE</b> (the most probable outcome of exposure to the hazard) | C   | <b>LIKELIHOOD</b> (that an individual, being exposed to the hazard, will result in the identified consequence) | L   |
| Catastrophe  | 100 | Almost certain   | 10  |
| Disaster   | 50  | Very likely  | 5   |
| Very serious   | 20  | Unusual  | 2   |
| Serious  | 10  | Remotely possible  | 1   |
| Important  | 5   | Considerable   | 0.5 |
| Notifiable   | 1   | Practically impossible   | 0.1 |

**EXPOSURE** (can be regularity of activity or a simultaneous, collective attendance)

|                   |                   |          |
|-------------------|-------------------|----------|
| <b>REGULARITY</b> | <b>ATTENDANCE</b> | <b>E</b> |
| Continuous        | OR                | 10       |
| Frequent          | OR                | 5        |
| Occasional        | OR                | 2        |
| Infrequent        | OR                | 1        |
| Rare              | OR                | 0.5      |
| Unlikely          | OR                | 0.1      |

**RISK SCORE: C x L x E =**

|             |           |  |
|-------------|-----------|--|
| >800        | VERY HIGH | <b>CONTROL STRATEGIES</b><br>(to mitigate risk from the identified hazard) |
| >300 to 800 | HIGH      |  |
| >90 to 300  | MEDIUM    |  |
| 90 or Less  | LOW       |  |

GENERAL SAFETY RISK ASSESSMENT  
Authorised by: University Safety Committee  
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**PART 2 – IDENTIFY HAZARDS, ASSOCIATED RISK RATINGS AND CONTROL STRATEGIES**

1. Pick out the hazards which are relevant for this task or activity.  
2. Give entry fields for drop-down selection of inherent risk values for C, L and E.  
3. In the comments box, describe when and where the hazard is present and other notes.  
4. Select the control measure (use from the Hierarchy of Control (top right)).  
5. Under Control Measures give a description of the control to be implemented.  
6. Give entry fields for drop-down selection of residual risk values for C, L and E.

|                        |                             |                    |                                     |
|------------------------|-----------------------------|--------------------|-------------------------------------|
| Elimination..... EL    | <b>HIERARCHY OF CONTROL</b> |                    |                                     |
| Substitution..... SU   | Engineering..... EN         | Isolation..... IS  | Quarantining..... QQ                |
| Administrative..... AD | Training..... TR            | Inspection..... IN | Personal Protective Equipment = PPE |

| IDENTIFIABLE HAZARD (selectable)              | INHERENT RISK |   |   | COMMENT B (when and where hazard is present) | CTRL | CONTROL MEASURES |   |   | RESIDUAL RISK |   |   |
|---|---------------|---|---|--|------|------------------|---|---|---------------|---|---|
|   | C             | L | E |  |      | C                | L | E |               |   |   |
| <b>GENERIC - associated with the activity</b> |               |   |   |  |      |                  |   |   |               |   |   |
| Slip and trips                                | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Manual handling                               | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Becoming struck, crushed or entangled         | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Sustaining cuts or abrasions                  | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Vibration                                     | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Burns   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Projections                                   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Asphyxiation                                  | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| <b>ELECTRICAL</b>                             |               |   |   |  |      |                  |   |   |               |   |   |
| High voltage equipment                        | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| 240V equipment                                | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| <b>CHEMICAL OR SUBSTANCE</b>                  |               |   |   |  |      |                  |   |   |               |   |   |
| Carcinogens                                   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Toxic (poisons)                               | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Radioactivity                                 | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Flammable                                     | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Explosive                                     | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Infectious material                           | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Biological                                    | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Corrosive                                     | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Solvents                                      | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Emissions                                     | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| <b>WORKING ENVIRONMENT</b>                    |               |   |   |  |      |                  |   |   |               |   |   |
| Dust  | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Noise   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Exposure to temperature                       | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| Inadequate lighting                           | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| UV or other radiation exposure                | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
| <b>OTHER HAZARDS</b>                          |               |   |   |  |      |                  |   |   |               |   |   |
|   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
|   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
|   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
|   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |
|   | 0             | 0 | 0 |  |      |                  |   |   | 0             | 0 | 0 |

**PART 3 – IMPLEMENTATION / ESCALATION PLAN**

I have reviewed this risk assessment and agree that the control measures will be implemented as described above.  
If other than a one-off activity, monitoring and review of their effectiveness will be carried out and recorded every  (enter period).

|   |           |      |
|---|-----------|------|
| NAME  | SIGNATURE | DATE |
| SUPERVISOR:   |           |      |
| HEAD OF SCHOOL, DIRECTOR, EQUIVALENT OR FORMALLY DELEGATED SIGNATORY: |           |      |

MY SIGNATORY AUTHORITY MUST BE RECORDED AND ONLY DELEGATED TO COMPETENT PERSONS OR AN AUTHORIZED COMMITTEE. RETAIN RISK ASSESSMENT FOR RECORDING.

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TAB BETWEEN FIELDS MAKING ENTRIES BY TYPING INTO THE GREY HIGHLIGHTED BOXES. WHEN CLICKED NUMERIC FIELDS OFFER DROP-DOWN SELECTIONS

| PART 1 – ACTIVITY / TASK DESCRIPTION - Use additional sheets if necessary - Peer check must be by person familiar with the planned activity  |                 |  |          |                                    |
|--|-----------------|--|----------|------------------------------------|
| Location   | Assessment Date | Expiry Date (max. 5 years)                               | Assessor | Peer checked by                    |
| Task / Activity / Project Title  |                 |  |          | How many persons will be involved? |
| Description (alternatively, a separate METHOD STATEMENT or equivalent detailed description may be referenced from here if a copy is attached)  |                 |  |          |                                    |
| <p>Describe the scope of your work. This is not a journal article method with a technical outline of control parameters. Describe what you will <b>physically</b> be doing!</p> <p>Include where you are doing it and what you will be using?</p> <p>This section can be copied from the Method Statement.</p> |                 |  |          |                                    |
| Workplace conditions (describe layout, access/egress, physical conditions (e.g. on a public thoroughfare, crowded room, outside enclosed by barrier), containment (e.g. ventilation, fume cupboards, safety cabinets, open bench-work) and other key factors impacting on the activity/ task).                 |                 |  |          |                                    |
| Describe workplace layout, conditions and relevant equipment or hazards  |                 |  |          |                                    |
| Related Documentation / Guidance (this may include referenced articles, legislation, standards or codes which must be specifically highlighted)  |                 |  |          |                                    |
| Method Statement:  |                 | Titles or links to associated documentation.             |          |                                    |
| SOPs (for equipment):  |                 | <b>All Engineering FYPs to have a Method Statement!!</b> |          |                                    |
| Other:   |                 |  |          |                                    |

**RISK CALCULATOR - when completing Part 2, refer to the variable definitions to determine Risk Rating and Control Strategies**

| CONSEQUENCE (the most probable outcome of exposure to the hazard) |                                    | C   | LIKELIHOOD (that an individual, being exposed to the hazard, will result in the identified consequence) |   | L   |
|---|------------------------------------|-----|---|---|-----|
| Catastrophe   | Multiple fatalities                | 100 | Almost certain  | The most likely outcome if the event occurs           | 10  |
| Disaster  | A fatality                         | 60  | Likely  | Not unusual and quite possible to occur               | 6   |
| Very serious  | Permanent disability or ill health | 25  | Unusual   | Possible but doubtful                                 | 3   |
| Serious   | Non-permanent injury or ill health | 15  | Remotely possible   | A possible coincidence                                | 1   |
| Important   | Medical attention needed           | 5   | Conceivable   | Has never happened in years of exposure, but possible | 0.5 |
| Not/noticeable  | Minor cuts, bruises, sickness      | 1   | Practically impossible  | Not known to ever have happened anywhere              | 0.1 |

| EXPOSURE (can be regularity of activity or a simultaneous, collective attendance) |                             |     | E   |     |
|---|-----------------------------|-----|---|-----|
| REGULARITY  | ATTENDANCE                  |     |   |     |
| Continuous  | Many times daily            | OR  | A crowd of people all of whom will be exposed to the hazard (e.g. public event, theatre, cinema)  | 10  |
| Frequent  | Approximately once daily    | OR  | A crowd of people some of whom will be exposed to the hazard (e.g. public event, theatre, cinema) | 6   |
| Occasional  | Once a week to once a month | OR  | A small group of people involved (e.g. classroom, lecture, laboratory, meeting)                   | 3   |
| Infrequent  | Once a month to once a year | OR  | Several people involved   | 2   |
| Rare  | Has been known to occur     | AND | A person carrying out a single task   | 1   |
| Unheard of  | Not known to have occurred  | AND | A one-off task by one person  | 0.5 |

| RISK SCORE  | RISK RATING | CONTROL STRATEGIES  |
|-------------|-------------|---|
| C x L x E = |             | (to mitigate risk from the identified hazard)   |
| >500        | VERY HIGH   | <ul style="list-style-type: none"> <li>Immediate action required.</li> <li>Do not proceed with task/activity until control measures have been implemented.</li> <li>Notify Supervisor, Safety &amp; Health Representative and Head of School.</li> <li>Arrange continuous review and monitoring.</li> </ul>   |
| >300 to 600 | HIGH        | <ul style="list-style-type: none"> <li>Consider not carrying out task/activity until control measures have been implemented as soon as practicable.</li> <li>Notify Supervisor and Safety &amp; Health Representative.</li> <li>Action plan to reduce risk.</li> <li>Monitor every subsequent exposure in addition to any other regular monitoring regime.</li> </ul> |
| >90 to 300  | MEDIUM      | <ul style="list-style-type: none"> <li>Implement immediate action to minimise potential for injuries.</li> <li>Notify Supervisor to organise remedial action before commencing activity.</li> </ul>   |
| 90 or Less  | LOW         | <ul style="list-style-type: none"> <li>Required action to be agreed with Supervisor.</li> <li>Remedial action to be taken as soon as practicable and within a month.</li> </ul>   |

**INHERENT (RAW) RISK** is the risk associated to a hazard now (ie. before NEW control measures are applied)  
**RESIDUAL RISK** is the estimated risk after control measures are applied.

When determining risk use the **RISK CALCULATOR** definitions to assist in determining the C, L and E values.

$$\text{RISK} = \text{CONSEQUENCE} \times \text{LIKELIHOOD} \times \text{EXPOSURE}$$

**EXPOSURE** can be either regularity of activity or the simultaneous, collective attendance. For example, a trip hazard from a raised paving brick may have only a low exposure if only one person per day walks over it. However, if 1000 persons per day cross it the exposure is much higher.

In another scenario, consider a safety guard on an item of equipment. If it fails, the person is still present so **EXPOSURE** is unaffected. It is the **LIKELIHOOD** which is reduced when the guard is in place. If you can separate the people from the hazard completely, only then would it be reasonable to redefine their degree of **EXPOSURE**.

Likewise, **CONSEQUENCE** can reduce only if the nature of the nature has changed. Otherwise, even with controls, should the controls fail the person will be exposed to the same consequences of the same hazard.

When selecting consequence ask yourself 'what is the worst thing that could reasonably occur following exposure to the hazard?'

Consider the best means of controlling the hazard. Note that PPE is the lowest level.

CONSEQUENCE and EXPOSURE do not change, the LIKELIHOOD is reduced

| PART 2 – IDENTIFY HAZARDS, ASSOCIATED RISK RATINGS AND CONTROL STRATEGIES              |               |   |   |       |  |            |  |    |                    |               |      |
|--|---------------|---|---|-------|--|------------|--|----|--------------------|---------------|------|
| 1. Pick out the hazards which are relevant for this task or activity.                  |               |   |   |       | Elimination..... EL  |            |  |    |                    |               |      |
| 2. Click entry fields for drop-down selection of inherent risk values for C, L and E.  |               |   |   |       | Substitution..... SU   |            |  |    |                    |               |      |
| 3. In the comments box, describe when and where the hazard is present and other notes. |               |   |   |       | Engineering..... EN  |            | Isolation..... IB  |    | Guarding..... GD   |               |      |
| 4. Specify the control measure type from the Hierarchy of Control (top right)          |               |   |   |       | Administrative... AD   |            | Training..... TR   |    | Inspection..... IN |               |      |
| 5. Under Control Measures give a description of the control to be implemented.         |               |   |   |       | Personal Protective Equipment = PPE  |            |  |    |                    |               |      |
| 6. Click entry fields for drop-down selection of residual risk values for C, L and E.  |               |   |   |       |  |            |  |    |                    |               |      |
| IDENTIFIABLE HAZARDS (editable)  | INHERENT RISK |   |   |       | COMMENTS   | CTRL       | CONTROL MEASURES   |    |                    | RESIDUAL RISK |      |
|  | C             | L | E | =     | (when and where hazard is present)   |            |  |    |                    |               |      |
| GENERIC - associated with the activity   |               |   |   |       |  |            |  |    |                    |               |      |
| Slip and trips   | 15            | 3 | 2 | 90 L  | Dislodged/removed sections of bicycle components (e.g. ball bearings, sections of wheel-spokes) General untidy work area. Wet floor. | TR, IN, EL | Inspect work area prior to commencing work and remove any trip/slip hazards. Store personal items in the storage provided. Work area to be tidy and dry. | 15 | 1                  | 2             | 30 L |
| Manual handling  | 15            | 3 | 2 | 90 L  | Wood planks being stored/moved may cause collisions or muscle injuries   | TR         | Ensure that safe lifting methods are used. Awareness of other users while working to avoid collisions  | 15 | 1                  | 2             | 30 L |
| Becoming stuck, crushed, entangled   | 0             | 0 | 0 | 0 -   | NA   |            |  | 0  | 0                  | 0             | 0 -  |
| ELECTRICAL   |               |   |   |       |  |            |  |    |                    |               |      |
| High voltage equipment   | 0             | 0 | 0 | 0 -   | NA   |            |  | 0  | 0                  | 0             | 0 -  |
| 240V equipment   | 50            | 3 | 2 | 300 M | Using electrical tools. Frayed cables, old equipment. Wet work area.   | TR, IN,    | Visual inspection of cables. Cease work and report if any electrical items contain damage or fraying. Ensure work area is dry.                           | 50 | 0.5                | 2             | 50 L |
| CHEMICAL & OR SUBSTANCE  |               |   |   |       |  |            |  |    |                    |               |      |
| Carcinogens  | 0             | 0 | 0 | 0 -   | NA   |            |  | 0  | 0                  | 0             | 0 -  |
| Toxic (poison)   | 15            | 3 | 2 | 90 L  | Chemical cleaning solution for the blades and gears  | SU, TR, AD | Less toxic alternative. SDS available. Users trained   | 5  | 1                  | 2             | 10 L |
| WORKING ENVIRONMENT  |               |   |   |       |  |            |  |    |                    |               |      |
| Dust   | 0             | 0 | 0 | 0 -   | NA   |            |  | 0  | 0                  | 0             | 0 -  |
| Noise  | 0             | 0 | 0 | 0 -   | NA   |            |  | 0  | 0                  | 0             | 0 -  |
| OTHER HAZARD   |               |   |   |       |  |            |  |    |                    |               |      |
| Shared work space  | 15            | 3 | 2 | 180 M | The work area is a shared workspace with other lab users   | AD, TR     | Practice safe work practices and report any potential hazards to area supervisor. Induct all participants and identify potential hazards.                | 15 | 1                  | 2             | 30 L |
|  | 0             | 0 | 0 | 0 -   |  |            |  | 0  | 0                  | 0             | 0 -  |

Zero is the default setting used on the document, **this must be changed**. If the value for C, L or E is 0, then there is no risk and the hazard line may be left blank.

More than one Control Measure may be used

**USEFUL TIPS**

- Don't 'minimise' the risk outcomes. Risk Assessments are meant to be an accurate and honest reflection of the risks. It is better to have a residual risk of 80, than to minimise to make it lower.
- If the hazard itself hasn't changed, then consequence won't either.
- Apply appropriate controls. To prevent sunburn you can't 'eliminate' the sun.
- Use the Risk Calculator on page 1. If hazard exists, there cannot be a C, L or E of zero.

Part 3 covers the endorsement of Supervisor (with agreed upon review period), and Head of School or equivalent. The EMS Safety Team has been made a formally delegated signatory for Risk Assessments and may endorse in place of the Head of School.

| PART 3 – IMPLEMENTATION / ESCALATION PLAN   |                      |                      |
|---|----------------------|----------------------|
| I have reviewed this risk assessment and agree that the control measures will be implemented as described above.  |                      |                      |
| If other than a one-off activity, monitoring and review of their effectiveness will be carried out and recorded every <input type="text"/> . (enter period) |                      |                      |
| NAME  | SIGNATURE            | DATE                 |
| SUPERVISOR: <input type="text"/>  | <input type="text"/> | <input type="text"/> |
| HEAD OF SCHOOL, DIRECTOR, EQUIVALENT<br>or FORMALLY DELEGATED SIGNATORY: <input type="text"/>   | <input type="text"/> | <input type="text"/> |

ANY SIGNATORY AUTHORITY MUST BE RECORDED AND ONLY DELEGATED TO COMPETENT PERSONS OR AN AUTHORISING COMMITTEE      RETAIN RISK ASSESSMENTS FOR REFERENCE

## Further Guidance

Managers and Supervisors are responsible for the provision of safe workplaces. They own risk assessments for activities in workplaces under their control and workers must consult with them to enable completion of risk assessments, when required.

The **UWA Task and Activity Planning Toolkit** provides guidance on a consistent approach to safety planning across the University and may be found on the UWA website. It provides more in-depth instruction for UWA General Risk Assessments and on other safe planning documents.

- A Job Safety Analysis (JSA) is another type of risk assessment document, more suited to short term or one-off tasks consisting of a series of steps, each of which can be assessed for associated risks.
- A Standard Operating Procedures (SOP) is used to provide guidance for use of hazardous equipment. All hazardous equipment should have an associated SOP. A SOP provides guidance for use, acts as a risk assessment by addressing specific hazards and their control measures and can be used to record individuals assessed as competent to use the equipment.