

## **Hazard Identification and Risk Management**

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Australian Workcover Authorities [supported by the Company] currently use a risk management approach in developing their legislative controls.

This means that:

- they expect the company, its management and employees to identify its risks to health and safety (using standard methods),
- they expect company, its management and employees to manage those risks under 'controlled, monitored processes', and finally,
- they expect company, its management and employees to use this approach to managing all necessary regulatory requirements.

### **What Is Risk Management?**

**Risk management, or risk assessments, are general terms used to describe the process of:**

#### **HAZARD IDENTIFICATION**

- i. identifying hazards, problems or likely risks
- ii. identifying the issues, the history, statistics and opinions relating to the problem
- iii. making a decision as to whether the problem is able to be solved, worth solving and the repercussions if the issue/problem remains unsolved

#### **RISK ASSESSMENT**

- iv. deciding on the options available and most appropriate actions to be taken
- v. estimating the likely effectiveness of the actions to estimate whether the problem will be improved or solved
- vi. implementing the control measures to improve the risks

#### **RISK CONTROL**

- vii. monitoring the new initiatives to determine their success
- viii. and long term monitoring to make sure problems do not re-appear.

### **When Do You Undertake Risk Assessments?**

It has become the policy of all states in Australia, supported by the Company to tackle problems using this risk assessment approach.

It is a requirement to use this method for manual handling, plant and equipment safety, chemicals/hazardous substances, noise and dust monitoring and also an expectation for areas such as new processes and new sites, occupational violence and other risk related areas.

**It is important to make sure that persons involved in using the work process methods (work instructions/JSA's) are part of the risk assessment process.**

### **Who Is Responsible ?**

Managers, and supervisors, including those with responsibility for planning work, are required to manage the risk assessment process at the workplace in conjunction with Operational Staff.

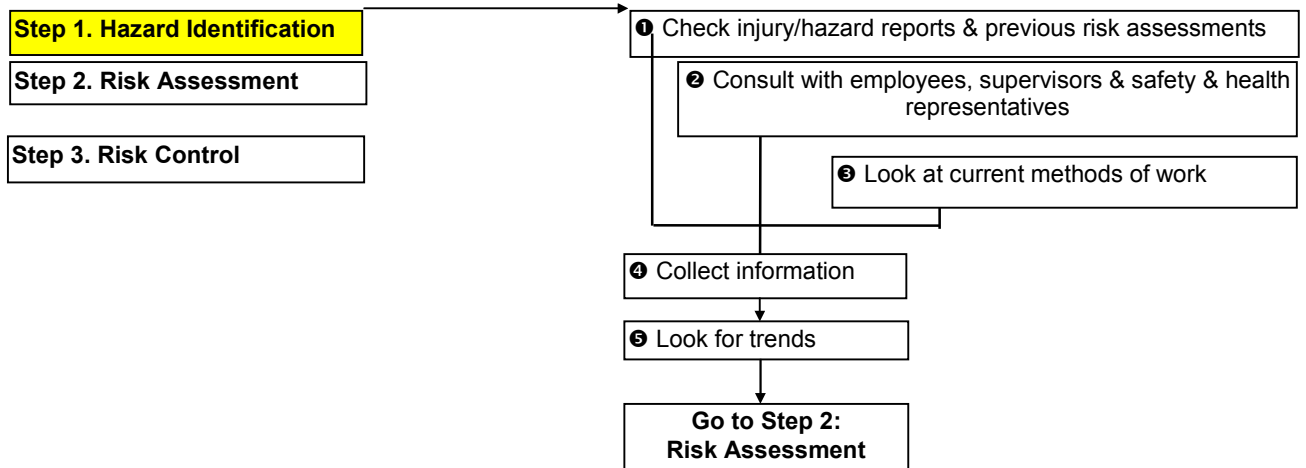
Managers are responsible for supporting site Managers including the conducting of safety awareness training and assisting managers with hazard identification, risk assessment and risk control measures.

### **How to Undertake a Risk Assessment**

- i. Make sure that the risk assessment you are about to do has not already been done. If it has, you should review both the hazard, the assessment and the controls to ensure you agree with the outcome of the assessment.
- ii. Review the risk assessment if necessary by following the process as described in this document, making sure you consult the persons who undertook the original risk assessment.
- iii. To review a current risk assessment, or undertake a new risk assessment, follow the three step process outlined below.
- iv. Ensure you action the risk controls and that both process and outcomes are able to be verified through audit.

## 1.0 Hazard Identification

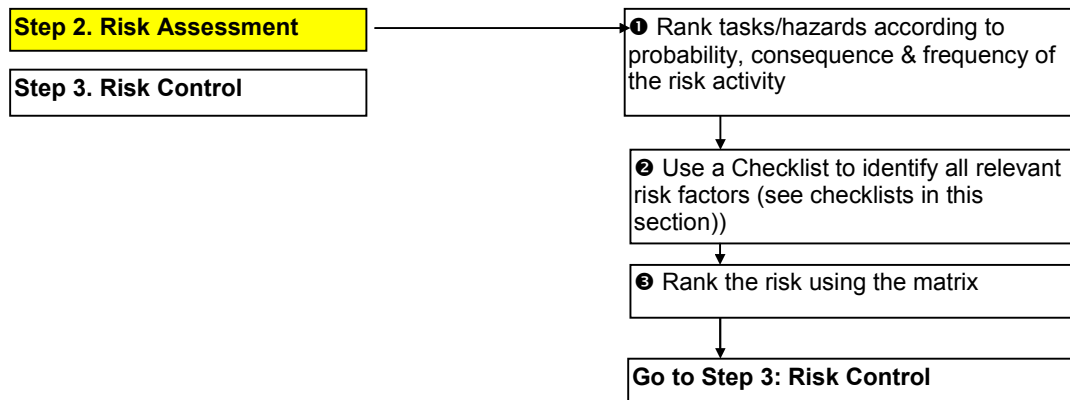
A **HAZARD** is any product, process, persons (or combination) that may cause harm or injury to a person/s health or well being.



Identify the hazards using the **HAZARD IDENTIFICATION CHECKLISTS** at the end of this section.  
*Complete Sections 1 & 2 on the Risk Assessment Form*

## 2.0 Risk Assessment

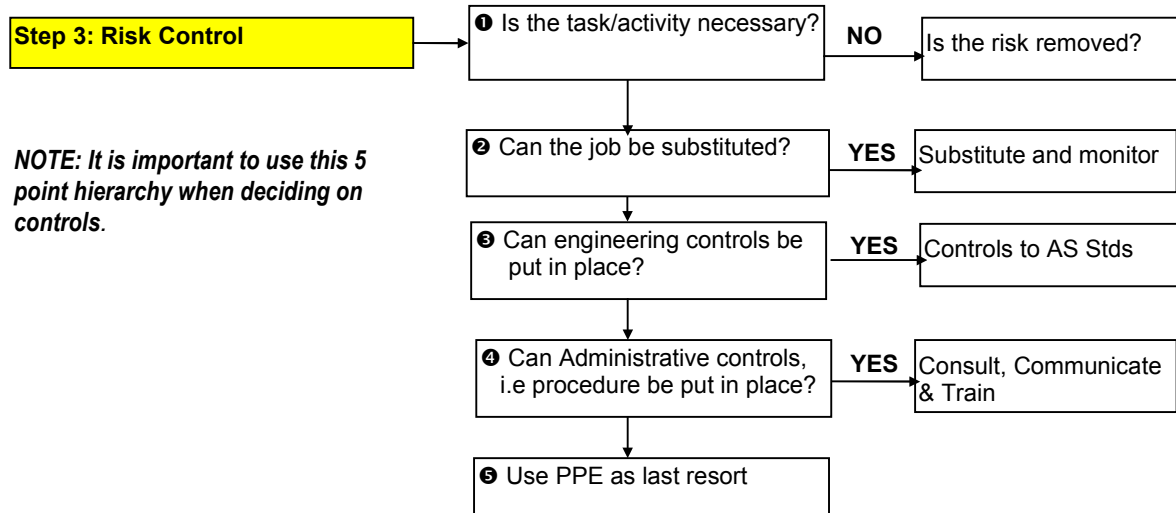
Assess the risk according to the risk assessment calculation sheet of probability, consequence, and frequency. (Refer to Risk Assessment Calculation).



Make sure all employees who are part of the work process are also part of the risk assessment process.  
*Complete Sections 3, 4 & 5 on the Risk Assessment Form – General*

### 3.0 Risk Controls

Use the hierarchy of controls method (see below) when identifying options to control hazards.



Initiate controls in order of priority, i.e. substitution, engineering, administrative or PPE. Training and personal protective equipment are not considered sufficient and appropriate controls unless all other options have been tested.

*Complete all necessary sections on the Risk Control Form as the monitoring and follow up is completed.*

#### Follow Up

- How do you intend to ensure the controls are effective NOW and in the FUTURE?
- Who is responsible for initiating controls?
- How do you know if the controls have minimised the hazard?
- Indicate what is intended on the Risk Control Plan.

LIKELIHOOD	VALUE	ACTUAL SCORE
• Common/very likely that it could happen	10	
• Quite likely that it could happen	6	
• Not likely but could happen	3	
• Unlikely to happen – quite remote	1	
• Virtually impossible to happen	0.5	

CONSEQUENCES	VALUE	ACTUAL SCORE
• Death or environmental disaster	10	
• Permanent disability or permanent damage to the environment	9	
• Serious injury, illness or serious environmental damage	7	
• Injury/illness requiring medical treatment or some temporary environmental damage	3	
• First aid injury/illness or minor temporary environmental damage	1	

EXPOSURE	VALUE	ACTUAL SCORE
• Continuous – all the time	10	
• Daily – consistent	6	
• Weekly – frequent	3	
• Monthly – periodic	2	
• Seldom, few times a year	1	
• Yearly or regular periodic basis	0.5	

## RISK CALCULATION SHEET

To be used for all risk assessment calculations

LIKELIHOOD X CONSEQUENCES X EXPOSURE = FINAL SCORE

	X		X		=	
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LEVEL OF RISK	SCORE
<b>VERY HIGH</b> Must initiate controls Senior Management Decision/Action required	<b>ABOVE 400</b>
<b>HIGH</b> Must initiate controls Line Manager/Foreman Decision/Action required	<b>200 – 400</b>
<b>MEDIUM</b> Review for improvement opportunities	<b>70 – 200</b>
LOW	20 – 70
VERY LOW	BELOW 20

**RISK ASSESSMENT FORM – General use** (Not to be used for manual handling tasks)

**Site:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Undertaken by:** \_\_\_\_\_

**Description of task/activity/plant/equipment etc:**

<b>1. Nature of Potential Hazard</b> e.g. slip, trip, fall from a height, electrocution, sprain, strain from force and repetition, being hit by falling object, being knocked over by forklift, snagging on moving parts of plant	<b>2. Potential Injuries or damage to plant</b> e.g. broken limbs, death, burns, asphyxiation etc.	<b>3. Probability, Exposure &amp; Consequence Value &amp; Score</b> (See Calculation Sheet)	<b>4. Suggested Remedial Action</b> i.e. identified through workplace consultation	<b>5. Amended Exposure, Frequency &amp; Consequence Value &amp; Score</b> (See Calculation Sheet)

**RISK ASSESSMENT CONTROL PLAN – General** (Not to be used for manual handling tasks)

6. <b>Actual actions to be taken</b> give clear indication of what is to be done, referring to other documents, person, training as necessary	7. <b>By whom</b> persons responsible to be named	8. <b>Date when actions are to be completed by:</b>	9. <b>Actual Completion Date</b>	10. <b>Signed off by Supervisor</b> of persons responsible for completing the actions	11. <b>Progressive monitoring and review</b> who/when/how is checking that the controls measures are working? Any new problems???

**Changes or modifications required and agreed.**

SIGNED: _____	DATE: _____
SIGNED: _____	DATE: _____
SIGNED: _____	DATE: _____

**MONITORING & REVIEW:** How do you intend to review the controls to ensure they are effective?

SIGNED: _____	DATE: _____
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**MANUAL HANDLING HAZARDS - Checklist**

<b>SUSTAINED ACTION</b>	⇒ bending, twisting, reaching
<b>REPETITIVE ACTION</b>	⇒ bending, twisting, reaching
<b>REPETITIVE FORCE</b>	⇒ lifting, pushing, pulling, carrying, speed of activity
<b>SUSTAINED FORCE</b>	⇒ lifting, pushing, pulling, carrying, speed of activity
<b>HIGH FORCE</b>	⇒ lifting, lowering, carrying, pushing, pulling, sudden
<b>AWKWARD POSTURE</b>	⇒ forward, sideways (more than 30cm)
<b>SUSTAINED VIBRATION</b>	⇒
<b>HANDLING OF PEOPLE/ANIMALS</b>	⇒ hand grips, holding, supporting
<b>HANDLING UNSTABLE OR UNBALANCED LOAD</b>	⇒ hand grips, holding, supporting
<b>HANDLING OF LOADS DIFFICULT TO HOLD/GRASP</b>	⇒ hand grips, holding, supporting
<b>REACHING</b>	⇒ above shoulder
<b>TIME</b>	⇒ more than 30 mins at a time, or over more than 2 hrs continuously
<b>RESTRICTED SPACE</b>	⇒ insufficient room for leverage/comfort
<b>STOOPING</b>	⇒ with hands below mid-thigh
<b>BULKY OR AWKWARD LOAD</b>	⇒ (more than 75cm)
<b>LAYOUT</b>	⇒ work Environment
<b>.AGE</b>	⇒ age of Employees
<b>CAPABILITY</b>	⇒ skills/competencies

**GENERAL HAZARDS - Checklist**

<b>ENTANGLEMENT</b>	⇒ hair, clothing, etc
<b>CRUSHING</b>	⇒ materials falling, plant tipping over, trapped between structures, contact with moving parts
<b>CUT – STAB</b>	⇒ contact with sharp or flying objects, disintegrating plant
<b>SHEARING</b>	⇒ plant or equipment shear points
<b>FRICITION</b>	⇒ physical contact with moving parts/materials
<b>STRIKING</b>	⇒ normal or unexpected movement with force
<b>HIGH PRESSURE FLUID/GAS</b>	⇒ oil, water, fuel, gas etc
<b>TENSION/ COMPRESSION</b>	⇒ springs, ropes, chains, belts
<b>ELECTRICAL</b>	⇒ contact with live conductors, electric shock
<b>EXPLOSION</b>	⇒ gases, vapours, dynamite, etc
<b>SLIP, TRIP, FALL</b>	⇒ slippery, uneven, broken walking surface
<b>ERGONOMIC</b>	⇒ repetitive movements, poor posture, excessive effort
<b>SUFFOCATION</b>	⇒ contaminated atmosphere, lack of oxygen
<b>HIGH TEMP OR FIRE</b>	⇒ high temp gas, liquids, or burning substances
<b>COLD TEMPS</b>	⇒ refrigerants, super cooled substances
<b>ISOLATION FACILITIES</b>	⇒ storm water drains, sewerage
<b>OTHER</b>	⇒ dusts, chemicals, radiation/gunfire, etc



### HAZARDOUS SUBSTANCES & DANGEROUS GOODS HAZARDS

<b>1</b>	<b>FIRE / EXPLOSION</b>	⇒ goods stored near naked flames, sources of heat
	<b>STORAGE</b>	⇒ containers, e.g. drums, bottles, etc
	<b>SPILLS</b>	⇒ containment in case of spills
	<b>SUFFOCATION</b>	⇒ contaminated atmosphere, lack of oxygen
	<b>HIGH PRESSURE FLUID / GAS</b>	⇒ sprays, pipe work
	<b>BURNS</b>	⇒ acids and alkalines
	<b>SKIN</b>	⇒ burns, dermatitis, dry skin
	<b>EYE</b>	⇒ burns, irritants

### TRAFFIC PLAN HAZARDS - Checklist

<b>POOR LIGHTING</b>	⇒ may dimly lit areas
<b>BLIND CORNERS</b>	⇒ corners where vision is unclear
<b>PEDESTRIAN THOROUGHFARES</b>	⇒ pedestrian walkways crossing forklift truck routes
<b>NOISE</b>	⇒ forklift truck operating in areas of excessive noise
<b>SPEEDING</b>	⇒ forklift trucks travelling at unsafe speeds
<b>OPERATOR VISION</b>	⇒ vision of the driver obstructed by size of load on tynes
<b>WORKSTATIONS</b>	⇒ personnel workstations in areas of forklift operation
<b>OTHER</b>	⇒ driver fatigue, dusty low vision areas, etc.

**CONFINED SPACE - Checklist**

<b>TOXIC VAPOURS</b>	⇒ e.g. carbon monoxide
<b>FLAMMABLE GASSES</b>	⇒ e.g. natural gas
<b>OXYGEN</b>	⇒ e.g. oxygen enrichment, deficiency
<b>THERMAL CONDITION</b>	⇒ e.g. heat stress
<b>DUSTS</b>	⇒ e.g. silica, cement
<b>MANUAL HANDLING</b>	⇒ e.g. using heavy equipment
<b>SLIP, TRIP, FALLS</b>	⇒ e.g. rubbish on floor
<b>MECHANICAL</b>	⇒ e.g. crushing, striking

**RESTRICTED ACCESS - Checklist**

<b>ELECTRICAL</b>	⇒ e.g. high voltage switchboard, transformers
<b>CHEMICALS</b>	⇒ e.g. storage areas, splash hazards
<b>HIGH PRESSURE</b>	⇒ e.g. steam, hydraulics, air
<b>TEMPERATURE</b>	⇒ e.g. naked flames, refrigerants, explosions
<b>NOISE</b>	⇒ e.g. machinery / plant
<b>HEIGHT</b>	⇒ e.g. roofs, crane walkways
<b>TRAFFIC</b>	⇒ e.g. mobile plan

