Introduction
This procedure describes the risk management process involved in the identification of hazardous manual tasks, assessing the risks, implementing controls and reviewing control measures. Throughout each step of the process, workers who are involved in the manual tasks are to be consulted. (See Appendix 1).

1. Identify Hazardous Manual Tasks
Identify hazardous manual tasks - those tasks that have the potential to cause a musculoskeletal disorder (MSD). A manual task is hazardous if it involves any of the following:
- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture
- exposure to vibration.

Hazards that arise from manual tasks generally involve interaction between a worker and:
- the work tasks and how they are performed
- the tools, equipment and objects handled
- the physical work environment.

Hazardous manual tasks can be identified by:
- Reviewing the duties in position descriptions to identify potential manual task risks
- Consulting with workers/students who are involved in manual tasks to find out what hazards are involved. For example, workers could be asked to identify tasks that:
  - are difficult to do (appearing harder than they should be)
- cause muscle fatigue
- involve awkward positions or movements or difficulty controlling loads
- cause discomfort

- Analysing Work Health and Safety and Workers Compensation statistics
- Observing how workplace equipment is set up, and the associated workflows between different areas
- Observing workers performing manual tasks
- Conducting Workplace Inspections
- Investigating manual task incidents to identify what caused the injury.

2. Assessing the risk of Hazardous Manual Tasks

Where the risk is well known and it is known how to control it, controls should be documented in related Safe Work Procedures (SWPs). Where risk controls are unknown or uncertain, a risk assessment should be conducted for any manual tasks that have been identified as hazardous using HS902 Manual Task Risk Management Form.

The risk assessment can assist in determining:

- which postures, movements and forces of the task pose a risk
- where during the task they pose a risk
- why they are occurring; and
- what needs to be fixed.

When conducting a risk assessment of manual tasks, the following factors must be taken into consideration:

- the posture and movement of the worker
- the forces exerted by the worker and any forces exerted on the worker by the person, animal or thing
- speed of movement(s) by the worker
- exposure of the worker to vibration; and
- the duration and frequency of the task.

You must also take into consideration the possible sources of the risks including:

- the layout or design of the work area. For example, is the area set up to prevent awkward postures?
- the work environment. Sources of risk in a work environment may include temperature, humidity, floor surfaces, lighting and obstructions
- the nature, size, weight or number of persons, animals or things handled, including any tools used
- work organisation and the system of work. For example, the pace of the work, duration of work and time constraints; and
- the physical characteristics of a worker, for example pre-existing health conditions.

3. Controlling the risks

You must aim to eliminate any hazardous manual tasks and associated risks. If it is not reasonably practicable to eliminate the risk, controls must be put in place to minimise the risk.

Control measures should be aimed at eliminating or minimising the frequency, magnitude and duration of movements, forces and postures by changing the source of risk: the work area, tools, load, environment, method of handling and/or the way work is organised. See Figure 1 for examples of controls using the Hierarchy of Controls.
## Hierarchy of control

<table>
<thead>
<tr>
<th>Level</th>
<th>Elimination</th>
<th>Substitution</th>
<th>Isolation</th>
<th>Engineering</th>
<th>Administrative</th>
<th>Personal protective equipment</th>
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</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>• Automate the manual task (such as using remote controls)</td>
<td>• Replace heavy items with lighter, smaller and/or easier to handle items</td>
<td>• Isolate vibrating machinery from the user, for example by providing fully independent seating on mobile plant</td>
<td>• Use mechanical lifting aids e.g. pallet jack; scissor lift trolley</td>
<td>• Rotate workers between different tasks to reduce duration of manual tasks</td>
<td>Use of the following:</td>
</tr>
<tr>
<td></td>
<td>• Deliver goods directly to the point of use</td>
<td>• Order smaller quantities or request items are packaged in smaller boxes to reduce weight of items and force required to handle</td>
<td>• Automate mail/book sorters, conveyor belts, tugs</td>
<td>• Use height adjustable workstations (relies on the individual to adjust as required)</td>
<td>• Consider engaging additional staff as required to carry out tasks</td>
<td>• Heat resistant gloves for handling hot items</td>
</tr>
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<td></td>
<td>Level 2</td>
<td>• Replace hand tools with power tools to reduce the level of force required to do the task</td>
<td>• Replace hand tools with power tools to reduce the level of force required to do the task</td>
<td>• Use height adjustable workstations (relies on the individual to adjust as required)</td>
<td>• Train workers to use control measures when carrying out tasks</td>
<td>• Shock absorbent shoes for work on hard concrete floors</td>
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<tr>
<td></td>
<td>Level 3</td>
<td></td>
<td>• Isolation</td>
<td>• Engineering</td>
<td>Isolation</td>
<td>• Safety glasses to reduce risk of eye injuries</td>
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<td></td>
<td>Administrative</td>
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<td>Personal protective equipment</td>
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### Personal protective equipment

- Use of the following:
  - Heat resistant gloves for handling hot items
  - Shock absorbent shoes for work on hard concrete floors
  - Safety glasses to reduce risk of eye injuries

### NOTE

Certain positions may require more awareness/training in relation to hazardous manual tasks that are required to be conducted on a day to day basis, for example, a storeman who may be continually lifting or moving items; a workshop user who may be required to lift, move and handle large pieces of material or a laboratory worker who is exposed to repetitive pipetting. Such training should include information on:

- manual task risk management, including the characteristics of the hazardous manual task/s
- specific manual task risks and the measures in place to control them
- how to perform manual tasks safely, including the use of mechanical aids, tools, equipment and SWPs.

### 4. Review controls

Control measures that have been implemented must be reviewed and, if necessary, revised periodically to make sure they are effective and to maintain a work environment that is without risks to health and safety.

Control measures may be reviewed using the same consultative methods as the initial hazard identification step. Consult your workers involved in the manual task and their health and safety representatives (if applicable) and consider the following:

- Are the control measures working effectively in both their design and operation, without creating new risks?
- Are workers actively involved in the risk management process? Are they openly raising health and safety concerns and reporting problems promptly?
- Has new work methods or new equipment reduced physical strain or difficulty?
- Has instruction and training on hazardous manual tasks and the implemented control measures been successful?
- Is the frequency and severity of MSDs reducing over time?
- Is an alteration planned to any structure, plant or process that is likely to result in a worker being exposed to a hazardous manual task?
- Has an incident occurred as a result of a worker being exposed to a hazardous manual task?
- If new information becomes available, does it indicate current controls may no longer be the most effective?

If problems are found, go back through the risk management steps (Sections 2 - 4), review your information and make further decisions about risk controls.
1. A hazardous manual task is **IDENTIFIED**

2. **ASSESS** the risk
   - Complete HS902 Manual Task Risk Management Form

3. **CONTROL** the risk
   - Follow existing documented controls
   - OR document controls in SWPs

4. **REVIEW** risk controls

**IN CONSULTATION WITH WORKERS**

- NO, or risk level is uncertain
- YES

Controls adequate

Controls inadequate
### Accountabilities

<table>
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<tr>
<th>Responsible Officer</th>
<th>Director of Risk and Safety</th>
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<td>Contact Officer</td>
<td>Senior Manager, Health &amp; Safety</td>
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### Supporting Information

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<th>Legislative Compliance</th>
<th>This Procedure supports the University’s compliance with the following legislation:</th>
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<tr>
<td></td>
<td><a href="#">Work Health and Safety Regulation 2017</a></td>
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<td>[Work Health and Safety Act 2011 (NSW)]</td>
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<th>Parent Document (Policy)</th>
<th>Health and Safety Policy</th>
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<tr>
<th>Supporting Documents</th>
<th>Hazardous Manual Tasks</th>
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<td>Workstations</td>
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<th>Related Documents</th>
<th>Hazardous Manual Tasks Code of Practice</th>
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<td></td>
<td>HS902 Manual Task Risk Management Form</td>
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<td>HS114 Workstation Checklist</td>
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<th>Superseded Documents</th>
<th>HS432 Hazardous Manual Tasks Procedure, v2.2</th>
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### Definitions and Acronyms

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<th>Hazardous Manual task</th>
<th>A hazardous manual task is a task requiring a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:</th>
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</table>
|                       | • repetitive or sustained force  
|                       | • high or sudden force  
|                       | • repetitive movement  
|                       | • sustained or awkward posture, or  
|                       | • exposure to vibration.  

These hazards directly stress the body and can lead to an injury.
Musculoskeletal disorder (MSD)

The term ‘MSD’ refers to an injury to, or a disease of, the musculoskeletal system, whether occurring suddenly or over time. It does not include an injury caused by crushing, entrapment or cutting resulting from the mechanical operation of plant.

An MSD may include:

- sprains and strains of muscles, ligaments and tendons
- back injuries, including damage to the muscles, tendons, ligaments, spinal discs, nerves, joints and bones
- joint and bone injuries or degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet
- nerve injuries or compression, for example carpal tunnel syndrome
- muscular and vascular disorders as a result of hand-arm vibration
- soft tissue injuries including hernias, and
- chronic pain.

An MSD can occur in two ways:

- gradual wear and tear to joints, ligaments, muscles and inter-vertebral discs caused by repeated or continuous use of the same body parts, including static body positions, or
- sudden damage caused by strenuous activity, or unexpected movements such as when loads being handled move or change position suddenly.

Injuries can also occur due to a combination of the above mechanisms.

Safe Work Procedure (SWP)

A procedure which describes how work is to be carried out in a safe and standardised process. It identifies the risks associated with a specific work task and incorporates the appropriate risk control measures into a detailed sequence of steps for doing the task safely. The SWP includes a description of the equipment used in the work, the standards or codes to be complied with and the qualifications and training required to do the activity.

Revision History

<table>
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<tr>
<th>Version</th>
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<th>Approval date</th>
<th>Effective date</th>
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<td>1.0</td>
<td>Director, Human Resources</td>
<td>1 January 2007</td>
<td>1 January 2007</td>
<td>New Document</td>
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<td>1.3</td>
<td>Adam Janssen</td>
<td>13 October 2010</td>
<td>13 October 2010</td>
<td>Links Updated</td>
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<td>2.0</td>
<td>Director, Human Resources</td>
<td>2 April 2013</td>
<td>2 April 2013</td>
<td>Document changed from guideline to procedure in accordance to new WHS act and Regulation 2011</td>
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<td>2.1</td>
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<td>30 April 2014</td>
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<td>29 February 2016</td>
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<td>3.0</td>
<td>Director of Risk and Safety</td>
<td>30 November 2020</td>
<td>30 November 2020</td>
<td>Full review with administrative updates, Updated Appendix</td>
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