Follow this step by step process to identify manual handling hazards. Further information is provided within the supporting procedure for Manual Hazardous Tasks.

**What is the manual task?**

Using the body to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing.

**Is the manual task hazardous?**

- Application of force:
  - Repetitive
  - Sustained
  - High
  - Sudden
- Posture:
  - Sustained
  - Awkward
- Movement:
  - Repetitive
- Exposure to vibration

**What is the risk of MSD?**

- How often and how long are specific postures, movement or forces performed or held?
- What is the duration of the task?
- Does the task involve high or sudden force?
- Does the task involve vibration?

**What is the source of risk?**

- Work area design and layout
- Systems of work
- Nature, size, weight and number of persons, animals or things handled
- Work environment

**Is the task necessary?**

- Can the source of risk (work area layout, environment, etc.) be changed?
- Can mechanical aids be used to perform the task?
- What training is needed to support the control measures?

**CONTROL**

- when the control measure is no longer effective
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary
- if a health and safety representative at the workplace requests a review.

**REVIEW**

**IDENTIFY**

**ASSESS**

**CONSULT**
**APPENDIX B – HAZARDOUS MANUAL TASK IDENTIFICATION WORKSHEET**

<table>
<thead>
<tr>
<th>Task</th>
<th>Repetitive or sustained force</th>
<th>High or sudden force</th>
<th>Sustained or awkward postures</th>
<th>Repetitive movement</th>
<th>Exposure to vibration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you ticked any boxes for a particular task, you should do a risk assessment of that task.
APPENDIX C – DISCOMFORT SURVEY

A discomfort survey can help identify hazardous manual tasks. Early reporting of symptoms can lead to risk controls being put in place before injury occurs.

The survey sheet below will help you identify and record instances where workers experience discomfort that:

> persists, or
> re-occurs the next day, or
> persists after rostered days off.

Encourage workers to report pain or discomfort at work or at any other time. Follow up the reasons for the problem. Even if only one worker reports problems, assess the presence of a risk factor.

Name (optional) __________________________________________________________

Date ________________________________________________________________

Job work location ______________________________________________________

Tasks involved _________________________________________________________

Time on this job: Less than 3mths [ ] 3mths to 1 yr [ ] 1 to 5 yrs [ ]

Supervisor ____________________________________________________________

1. Do you suffer from swelling, numbness, tingling, ‘pins and needles’ stiffness, aches and pains in any part of the body? Indicate in the diagrams where the problem occurs.

2. Rate the level of discomfort/pain on a scale of 1 to 5

1. ______ 2. ______ 3. ______ 4. ______ 5. ______

Just noticeable Moderate Unbearable

3. What do you think caused the problem?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
### Location of task:
- Description of hazardous manual task:
- Date of assessment:

### Management rep:
- Health and Safety rep:
- Others (workers, consultants):

### Reason for identification
- Existing task
- Change in task, object or tool
- New task
- New information
- Report of musculoskeletal disorder (MSD)

### Step 1 – Does the task involve repetitive or sustained movements, postures or forces?
As a guide:
- Repetitive means the movement or force is performed more than twice a minute and
- Sustained means the posture or force is held for more than 30 seconds at a time.

<table>
<thead>
<tr>
<th>Postures and Movements (place a tick in the 'yes' column each time you observe repetitive movement or sustained posture)</th>
<th>Yes</th>
<th>This action happens when...</th>
<th>because... (describe why)</th>
<th>This is the source of the risk</th>
<th>If any boxes are ticked, what are possible controls to reduce the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BACK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bending or twisting, e.g. more than 20 degrees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forwards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sideways</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twisting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bending, e.g. more than 5 degrees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backwards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postures and Movements (place a tick in the ‘yes’ column each time you observe repetitive movement or sustained posture)</td>
<td>Yes</td>
<td>This action happens when...</td>
<td>because... (describe why)</td>
<td>This is the source of the risk</td>
<td>If any boxes are ticked, what are possible controls to reduce the risk</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>NECK OR HEAD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bending or twisting e.g., more than 20 degrees</td>
<td></td>
<td>Forwards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sideways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Twisting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bending e.g., more than 5 degrees</td>
<td></td>
<td>Backwards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ARMS/HANDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working with one or both hands above shoulder height</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaching forwards or sideways more than 30cm from the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaching behind the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive bending of the wrist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twisting, turning grabbing, picking or wringing actions with the fingers, hands or arms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LEGS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squatting, kneeling, crawling, lying, semi-lying or jumping.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standing with most of the body’s weight on one leg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VERY FAST MOVEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FORCES (Place a tick in the ‘yes’ column each time you observe repetitive or sustained forces)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>This action happens when...</th>
<th>because... (describe why)</th>
<th>This is the source of the risk</th>
<th>If any boxes are ticked, what are possible controls to reduce the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting or lowering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrying with one hand or one side of the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exerting force with one hand or one side of the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pushing, pulling or dragging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very fast actions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working with the fingers close together or wide apart</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applying uneven, fast or jerky forces</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holding, supporting or restraining anything (including a person, animal or tool)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Step 2 – Does the task in step 1 involve long duration?

Tick yes if the task is done for:

<table>
<thead>
<tr>
<th>Duration</th>
<th>Yes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 2 hours over a whole shift,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continually for more than 30 minutes at a time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you ticked yes then the task is a risk and must be controlled.
### Step 3 – Does the task involve high or sudden force?

<table>
<thead>
<tr>
<th>FORCES (Tick yes if the task involves any of the following high or sudden forces, even if the force is applied only once)</th>
<th>Yes</th>
<th>This action happens when...</th>
<th>because... (describe why)</th>
<th>This is the source of the risk</th>
<th>If any boxes are ticked, what are possible controls to reduce the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting, lowering or carrying heavy loads</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Throwing or catching</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hitting or kicking or jumping</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applying a sudden or unexpected force including:</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• handling a live person or animal or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• applying uneven, fast or jerky forces during lifting, carrying, pushing or pulling or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Pushing or pulling objects that are hard move or stop eg a trolley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exerting force while in an bent, twisted or awkward posture including:</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• supporting items with hands are above shoulder height or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• moving items where legs are in an awkward posture, working with fingers pinched together or held wide apart</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Using a finger grip or pinch grip or an open handed grip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exerting a force with the non-preferred hand</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needing to use two hands to operate a tool designed for one hand</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The task can only be done for short periods of time</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two or more people need to be assigned to handle a heavy, awkward or bulky load</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers report pain or significant discomfort during or after the task</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger workers assigned to do the task</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees say the task is physically very strenuous or difficult to do</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers think the task should be done by more than one person, or seek help to do the task as it requires high force</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 4 – Is there hand, arm or whole body vibration?

Tick yes if any of the following environmental factors are present in the task.

<table>
<thead>
<tr>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving for long periods</td>
</tr>
<tr>
<td>Driving on rough roads</td>
</tr>
<tr>
<td>Frequent use of hand-powered tools or use for long periods</td>
</tr>
<tr>
<td>Using high grip forces or awkward postures when using power tools</td>
</tr>
<tr>
<td>Use of machines or tools where the manufacturer’s handbook warns of vibration</td>
</tr>
<tr>
<td>Workers being jolted or continuously shaken</td>
</tr>
<tr>
<td>Use of a vehicle or tool not suitable for the environment or task</td>
</tr>
</tbody>
</table>

Step 5 – Is there a risk?

Did you answer yes in step 1 and step 2? The task is a risk. Risk control is required.

Did you answer yes in step 3? The task is a risk. Risk control is required.

Did you answer yes in step 4? This task requires further investigation.

To aid prioritisation of timing and resourcing risk controls you may also need to consider:

- Number of ticks or risk factors.
- Additional factors such as injuries associated with the task.

These items capture degree and likelihood of harm. You will also need to consider the availability and suitability of risk controls for the task.
**RISK CONTROL**

**What needs to be fixed to control the risk? (Refer Section xx)**

You may need to use a combination of risk controls to eliminate or minimise the risk as far as reasonably practicable.

Can you stop doing the task or part of the task?
- Yes → How?
- No →

Can you eliminate or reduce the risk by doing one or more of these things?
- altering the work area design and layout
- altering the equipment, machinery and loads handled
- altering the workplace environment
- changing the work organization, work practices or systems of work
- Yes → How?
- No →

What information, instruction, training and supervision is necessary to make the new procedure work properly?

Can you reduce the risk with information, instruction, training and supervision? How?
## APPENDIX E – CONTROLLING MSD RISKS THROUGH DESIGN

<table>
<thead>
<tr>
<th>Type of plant</th>
<th>MSD risk</th>
<th>Possible design solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road-making machinery</td>
<td>Repetitive or sustained twisting of the neck and body while reversing. This is caused by the seat being fixed in a forward-facing position.</td>
<td>Design a swivel seat-mount together with two sets of controls, or controls that move with seat rotation.</td>
</tr>
<tr>
<td>Forklifts</td>
<td>Sustained exposure to whole-body vibration transferred through the seat. Repetitive or sustained bending of the neck and back to see the work properly (for example, continually looking up to place loads on high shelves).</td>
<td>Install damping mechanisms in the seat, cabin and vehicle suspension. Install visual aids such as mirrors or a video camera and screen.</td>
</tr>
<tr>
<td>Wrapping machines on process lines</td>
<td>Strain on the lower back when handling heavy rolls of plastic wrapping in awkward and twisted postures, often above shoulder height. This is caused by inappropriate design and positioning of the roll spindle and by restricted access.</td>
<td>Design the spindle to be adjustable. This allows the rolls to be loaded at a suitable height and orientation, and eliminates the need to lift them. Design equipment to help worker load rolls. Locate the spindle in an accessible place on the plant. Provide information about how to install the plant in a way that allows adequate access.</td>
</tr>
<tr>
<td>Power drills</td>
<td>Prolonged use of the forearm muscles and wrist caused by a heavy or poorly balanced drill. Exposure to vibration or impact shock recoil from hammer drills. Excessive force needed to grip and control the tool to counter the effect of vibration and impact shocks.</td>
<td>Design drills to be as light as possible. Design drills with the handle under the drill’s centre of gravity. Design plant to reduce shock and vibration. Provide a suitable way of holding the tool with both hands.</td>
</tr>
<tr>
<td>Pliers</td>
<td>Pressure to the palm of the hand caused by handles that are too short. Prolonged use of the forearm muscles and compression of the wrist caused by using pliers with straight handles.</td>
<td>Design pliers with handles that extend beyond the palm. Design pliers with bent handles so that the user can maintain a straight wrist.</td>
</tr>
<tr>
<td>Crimping, clamping and cutting tools</td>
<td>Excessive force with outstretched fingers required to grip handles that are too wide apart.</td>
<td>Design handles with a grip span of 10 cm or less.</td>
</tr>
<tr>
<td>Chainsaws</td>
<td>Excessive vibration. High force required to handle the chainsaw.</td>
<td>Design to reduce vibration. Design the chainsaw to be as light as possible, and provide well-placed handles.</td>
</tr>
<tr>
<td>Chairs</td>
<td>Poorly designed chairs that cannot be adjusted provide little back support and cause workers to adopt poor postures and movements.</td>
<td>Follow existing design guidelines for chairs, and consider how the chair will be used in the workplace.</td>
</tr>
<tr>
<td>Work-benches, workstations and other work surfaces</td>
<td>Workstations that cannot be adjusted result in unnecessary reaching, bending and exertion of force.</td>
<td>Design workstations to be adjustable. Alternatively, dimensions should suit as many workers as possible.</td>
</tr>
</tbody>
</table>