Hazardous Manual Tasks

Couple of takeaways

- Manual handling can refer to any activity requiring a person to use their body to push, pull, lift, carry or restrain something and includes a wide range of activities, for example stacking shelves, working with heavy tools and entering data on a computer.
- There are many risk factors involved in manual tasks which can result in an injury. A thorough risk assessment of manual tasks can help identify those activities which present a hazard and identify suitable controls.

What is this procedure for?

This procedure has been developed to provide detail on how to identify hazardous manual tasks, assess the risks of musculoskeletal disorders and eliminate or minimise those risks.

This procedure applies to all Hydro Tasmania group workers and is also relevant for designers, manufacturers, importers or suppliers of equipment, materials and tools used for work, as well as designers of workplaces where manual tasks are carried out.

What are the roles & responsibilities?

Asset Owner shall

- Ensure, so far as is reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.

Hydro Tasmania group leadership team shall

- Take reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from hazardous manual tasks.

WHS team shall

- Co-ordinate manual task and bio-mechanical task assessment programs
- Assist with the management of manual task risk minimisation processes.

Workers shall

- Take reasonable care for their own health and safety and ensure that their own activities do not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to health and safety at the workplace.

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Designers shall

- Eliminate or minimise the risks of Musculoskeletal Disorders (MSDs), which are often associated with the poor design and layout of work areas as well as the design of equipment, tools, packaging, and materials. They must ensure, so far as is reasonably practicable, that the plant or structure they design, manufacture, import or supply is without risks to health and safety.

How is the process managed?

General

Most jobs involve carrying out some type of manual task using the body to move or hold an object. Manual tasks cover a wide range of activities, for example stacking shelves, working with heavy tools and entering data into a computer. Hydro Tasmania group manages the risks associated with those manual tasks that have the potential to cause MSDs by following a systematic process as provided within this standard that involves:

- Identifying manual tasks that are hazardous
- If necessary, assessing the risks of MSDs associated with the hazardous manual task
- Implementing suitable risk control measures
- Reviewing the effectiveness of control measures.

A Hazardous Manual Task Identification Worksheet in Appendix 3 can be used to identify if hazardous manual tasks exist for a work area and /or task or defined project. Where hazardous manual tasks are identified, this worksheet should be completed in consultation with management or supervisory staff and the workgroup and if necessary, involve a subject matter expert and/or an ergonomist.

Assessing the risks

A risk assessment involves examining the characteristics of the hazardous manual task in more detail to assess whether the forces, movements and postures are undertaken in such a way that they give rise to the risk of MSDs.

When should a risk assessment be conducted?

Hydro Tasmania group should carry out a risk assessment for any manual tasks that have been identified as being hazardous, unless the risk is well-known, and workers know how to control it. A risk assessment can help determine:

- Which postures, movements and forces of the task pose a risk
- Where during the task they pose a risk
- Why they are occurring
- What can be done to minimise the risk of injuries and MSDs.

How to do a risk assessment for hazardous manual tasks

Identify personnel that should participate in the risk assessment, for example those workers who do the task and/or their health and safety representative, and management that exercise control over how the task that is done.

Describe the task and the area where it is performed. Note which body parts are likely to be at risk of injury, then work through the assessment

together to determine which risk factors pose a risk and why the risk exists.

The whole task should be examined, although it may help to look at the task in stages to identify all the risk factors. Looking at each of the steps identify the different sources of risk, which are the things that should be changed to control the risks.

What are the risk factors?

Working through the following questions assist in determining which postures, movements and forces of a task pose an unacceptable risk. The Risk Assessment Worksheet in Appendix 5 may be used to record the findings.

Question 1: Does the task involve any of the following.

- Repetitive movement?
- Sustained or awkward postures?
- Repetitive or sustained forces?

As a general guideline, 'repetitive' means that a movement or force is performed more than twice a minute and 'sustained' means a posture or force is held for more than 30 seconds at a time.

Some examples of postures and movements that pose a risk if they are repetitive or sustained are:

- Bending the back or head forwards or sideways more than 20 degrees.

For some complex situations, expert or specialist advice may be useful when conducting a risk assessment. There are a range of risk assessment tools that may be used. Further information is in the Appendix.

Assessing similar tasks

If a number of workers carry out very similar hazardous manual tasks, the tasks can be collectively assessed as a group instead of assessing each task individually.

- Bending the back or head backwards more than 5 degrees or looking up.
- Twisting the back or neck more than 20 degrees
- Working with one or both hands above shoulder height
- Reaching forward or sideways more than 30cm from the body
- Reaching behind the body
- Standing with most of the body's weight on one leg
- Twisting, turning, grabbing, picking or wringing actions with the fingers, hands or arms that includes excessive bending of the wrist
- Working with the fingers close together or wide apart
- Squatting, kneeling, crawling, lying, semi-lying or jumping
- Very fast movements, for example packing bottles from a fast-moving process line.

The risk increases as the degree of bending and twisting increases. The risk is greatest when the postures and movements are extreme, that is, toward the end of the movement range, and when they feel uncomfortable for the worker.

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Question 2: Does the task involve long duration?

If a task has postures, movements or forces that are also repetitive (more than two per minute) and/or sustained (held for more than 30 seconds), the task duration should be determined. The duration of the task is how long the task is carried out over a whole shift or continually at any time during a shift. Tasks that continue over a long period or are repeated over the workday increase the risk of injury.

As a general guideline, long duration means the task is done for more than a total of 2 hours over a whole shift or continuously for more than 30 minutes at a time.

Question 3: Does the task involve high or sudden force?

High forces can cause MSDs even if they are not repetitive or sustained. This means that any task involving high force may present an unacceptable risk, even if it is only done occasionally or for short periods. The longer and more often force is applied and the higher the force, the greater the risk.

The risk in tasks involving high force is related to:

- The intensity of the force needed - forceful muscular exertions place high stress on the muscles, tendons, joints, ligaments and vertebral discs.
- The speed involved - fast movements (particularly if repeated) can injure muscles, tendons and ligaments. The rapid or sudden speed changes caused by sudden or unexpected movements are high risk.
- Whether the force is jerky or sudden - forces suddenly applied or stopped can overload the muscles, tendons, joints, ligaments and vertebral discs. This can occur when throwing or catching loads, or when the load or item worked on moves unexpectedly (for example, when pulling up a fence post that suddenly comes free).

Question 4: Does the task involve vibration?

Prolonged exposure to whole-body or hand-arm vibration increases the risk of MSDs and other health problems. The degree of risk increases as the duration of exposure increases and when the amplitude of vibration is high. Some examples of sources of vibration are:

- Driving, particularly on rough roads
- Frequent or prolonged use of hand powered tools
- Use of machines or tools where the manufacturer's handbook warns of vibration
- Workers being jolted or continuously shaken
- Use of a vehicle or tool not suitable for the environment or task.

Question 5: Is there a risk?

The task involves a risk of MSD if you have answered 'yes' to either:

Question 1 and Question 2	The task involves repetitive or sustained postures movement or forces, and it involves long duration.
Question 3	The task involves high force or sudden force.
Question 4	The task involves vibration

A task may involve more than one risk factor. Where a number of risk factors are present and interact within a task, the risk of MSD increases significantly.

What are the sources of the risk?

When conducting the assessment, think about the sources of any risks that are present in the task. These will be the things that you may be able to change to eliminate or reduce the risk of MSD. For example, poor postures and movements may be due to the layout of the workplace, high forces may be due to the loads being handled, and the frequency and duration of the task may be due to the work organisation, limited staff numbers or increased work pace to meet tight deadlines.

The main sources of risk are:

- Work area design and layout
- The nature, size, weight or number of things handled in performing the manual task,
- Systems of work
- The environment in which the manual task is performed.

These sources of risk can also make the task more difficult to perform and therefore increase the risk of MSD.

For each risk factor, a couple of questions should be posed:

- Where in the task are they occurring
- Why each of these actions is occurring (source of the risk).

The answers to these questions will provide the information on how to fix the source of the risk and hence control the risk of MSD.

Consider the work area design and layout

A work area includes work benches, conveyors, furniture and fittings and the equipment used by workers doing that job. The positioning and relationship of the different elements in a work area to each other and to the worker are important because of the effect on working postures. A work area that is designed without consideration of the risks that arise from hazardous manual tasks may impose awkward postures on workers undertaking manual tasks, for example, bent and twisted positions with shoulders raised and the need to reach for items or carry loads over long distances.

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Consider the nature, size, weight, or number of things handled

Loads

Loads can be a source of risk due to the amount of muscular effort needed to handle them. The harder to grip and control a thing, the greater the force required to handle it.

The risk can rise from:

- Size, shape, and weight of load – loads that are large, bulky, or heavy and cannot be held close to the body or are asymmetric and put uneven forces on the spine
- Loads that are difficult to grip through unsuitable handles, handholds or surface textures
- Unstable or unwieldy loads can create sudden high muscle forces and result in overloading of muscles, tendons, or discs.

Tools

Tools that are unsuitable for the task can be a source of risk by increasing the force required, or by promoting sustained or awkward postures. Risks can arise from:

- Weight – heavy hand tools, particularly if held for long periods of time, increase the force and effort required to perform a task.
- Balance – if the heaviest part of the tool is in front of the wrist, the force required to grip the tool and stop it tilting forward is increased.
- Handle design – if the handle diameter is too large or too small, the grip span of the hand will create awkward postures and greater force will be required to control the tool. A handle that is too short or has prominent edges, can result in damaging compression of the palm.
- Handle orientation – if the handle design does not place the wrist in a handshake position, the worker will need to use an awkward posture to operate the tool. Tools that cannot be adapted for use by both hands or are designed for right-handed use only can result in awkward postures and increased force.
- Shock loading and impact – tools that deliver impacts such as hammers, hammer drills, and nail guns transmit impact forces to various ligaments and can require the use of a firmer grip to maintain control. They are a particular source of risk if used repetitively and for long periods.
- Prolonged use – continued use of any hand tool (even tools that are well suited to the user and designed for the task) without adequate time to recover will increase risk of injury due to the sustained force to support it. Vibrating tools increase risk.
- Maintenance – poorly maintained or irregular service of tools and equipment may increase the effort needed to use them. For example, an unsharpened knife will increase the force required to bone and slice meat.

Consider the systems of work

Systems of work, or the way work is organised, can influence the physical and mental demands that a manual task places on a worker. The fatigue and strain (physical and mental) that may arise from the aspects of work (task demands, task control and resources and support provided) bring on physiological responses such as increased muscular tension and affect the function of muscles, nerves and blood vessels, increasing the risk of the worker developing an MSD.

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The sources of risk include:

- Time constraints
- Pace and flow of work across the working day or shift
- Ability for workers to influence workload or work methods and changes in the workplace
- The level of resources and guidance
- Consultation processes
- Work roles and performance requirements or processes for dealing with conflicts
- Staffing levels, skill mix and shift arrangements.

Workers will also have different physical and psychological characteristics and these individual factors may increase the risk, for example:

- Skills and experience – being inexperienced in a job may increase the risk
- Physical characteristics – an overload situation may result from a mismatch between the worker and the task
- Unaccustomed work – workers who are new, have transferred from another job or are returning from extended leave and whose muscles are not conditioned to the work.

Consider the workplace environment

The sources of risk in the work environment include:

- Cold environments such as in cool rooms, freezers, cold stores or working outside in cold and/or wet weather can lower body and hand temperature and make handling and gripping objects more difficult. Increased grip force can also result from reduced sensitivity in cold hands or from wearing gloves. Cold can also significantly increase the risk of hand-arm vibration. Working in a cold environment requires thick or heavy protective clothing that restricts movement which can increase the risk of MSD. It can also cause overheating of the body as the clothing does not allow heat or sweat to dissipate and may decrease the blood flow to muscles, increasing fatigue.
- High temperatures - - (including radiant heat), for example, working in hot weather can make handling and gripping objects more difficult. Workers may have difficulty grasping objects due to perspiration on the hands or there may be sudden or unexpected forces due to loads slipping.
- Humid environments – caused by processes such as the weather can also increase the risk of developing MSD. Handling wet or damp objects may require increased force. Humidity may also increase discomfort and fatigue.
- Wind - May increase the force required to handle items and reduce control while handling large objects, especially those that are flexible and have a large surface area. When working in windy conditions and in low temperatures that are also windy, the resultant wind chill may lower the body temperature further.
- Slippery and uneven floor surfaces - May increase the exertion required to perform manual tasks due to difficulty maintaining stability. Unsuitable floor coverings (for example carpet) may increase friction when moving objects such as trolleys.
- Obstructions – caused by poor r housekeeping and cleaning can lead to awkward postures such as reaching or bending over obstacles

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- Lighting - low or high levels of lighting, as well as glare and reflection, may lead to awkward or sustained postures to either improve vision or to avoid glare.

How do we control 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, tool, load, environment, method of handling and/or the way work is organised.

Hierarchy of control		Examples of control measures
Level 1	Elimination	• Automate the manual task (such as using remote controls) • Deliver goods directly to the point of use to eliminate multiple handling
Level 2	Substitution	• Replace heavy items with those that are lighter, smaller and/or easier to handle • Replace hand tools with power tools to reduce the level of force required to do the task
	Isolation	• Isolate vibrating machinery from the user, for example by providing fully independent seating on mobile plant
	Engineering	• Use mechanical lifting aids • Provide workstations that are height adjustable
Level 3	Administrative	• Rotate workers between different tasks • Train workers to use control measures implemented when carrying out normal tasks
	Personal protective equipment	• Heat resistant gloves for handling hot items • Shock absorbent shoes for work on hard concrete floors

Purchasing to eliminate or minimise risks

Before purchasing equipment, such as tools, containers, workstations, machinery and vehicles, the design should be reviewed to confirm that it does not contain unacceptable hazardous manual task risks and best matches the needs of workers. Pre-purchase Evaluation procedure should be used for this purpose.

Implementing control measures

Risk control may initially involve using short term, interim measures while a long-term solution is developed. For example, temporarily raise the bench until it can be replaced or altered permanently or rotate employees through a task to reduce the time spent working at a low bench until it can be changed.

Where practical, measures to control the risks arising from MSD's should be captured within relevant HSE hazard or risk registers (refer to HSE Hazards, Risks and Opportunities procedure).

Training program

Manual handling and hazardous manual task training shall be provided as part of Hydro Tasmania group's on-going MSD reduction program. Training shall be provided to:

- Workers required to carry out, supervise or manage hazardous manual tasks

- In-house designers, engineers and officers responsible for the selection and maintenance of plant and/or the design and organisation of the job/task
- Any health and safety representatives.

The training shall include information on:

- Manual task risk management, including the characteristics of hazardous manual tasks
- 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 safe work procedures
- How to report a problem or maintenance issues. Records of training shall be maintained accordingly.

Reviewing control measures

Identified hazardous manual tasks and their associated control measures shall be reviewed and, if necessary, revised to make sure they work as planned and to maintain a work environment that is without risks to health and safety.

Control measures may be reviewed using the same methods as the initial hazard identification step.

Designers

The optimal time to eliminate or minimise the risk of MSDs is at the design and planning stage – when hazards and risks can be 'designed out' before they are introduced into a workplace. Designers of plant and structures shall ensure, so far as is reasonably practicable, that products are without risks to health and safety when used for a purpose for which they were designed or manufactured. Ergonomic principles shall be applied in the design stage. This means that a manual task should be designed to fit the people doing the task, not the reverse. Ergonomics involves consideration of the variability in human capability and an understanding of how people interact with the work environment, tools and equipment. If the design is outsourced the designer shall provide certain information as part of the contract for service, including:

- The purpose for which the plant or structure was designed
- How you have dealt with hazards that may impact on manual tasks in design, and whether there are any residual risks
- How to handle the product safely, including during its transportation, installation, operation, maintenance and disposal.

Design of workplaces

Designers of buildings used as workplaces should consider the manual tasks that may be performed throughout the lifecycle of the building, from construction through to use, maintenance, refurbishment, and potential demolition. Refer to Hazard and operability study (HazOps) procedure.

Design of plant

The safe design of plant plays a critical role in reducing the risk of MSD for workers. When designing plant, consideration shall be given to all phases of its life, including manufacture, cleaning and servicing. If practicable, trial a prototype in a range of operating conditions and think

about how the plant will be used. Change any aspects of the design that increase the risk of injury, for example:

- Eliminate or reduce the number of repetitive actions, postures and movements required to operate the plant
- Design handles on tools and controls to allow normal wrist postures
- Reduce the forces required to operate the plant
- Provide instructions, signs or symbols to help people use the plant properly
- Take into account the range of physical characteristics of those who use the plant, such as size and strength
- Ensure that the plant operates at a speed or rate that would suit most users
- Ensure that regular maintenance points are easily accessible.

Appendix 1: Hydro Tasmania Group MSD prevention program

The following table provides detail on a number of manual handling and hazardous manual task initiatives. Table 1 is representative of Hydro Tasmania group overall approach to manage musculoskeletal risks as far as reasonably practicable. The primary elements include education, health and HSE systems introduced to support hazard reduction.

Initiative	Objective	Scope	When
Education			
Induction	Introduction of the Hydro Tasmania group program and services to manage musculoskeletal risks	Employee	Within 4 weeks of starting work
Manual Handling Training	Raising an individual's awareness around manual handling and introducing practical skills for success.	Employee	Within 8 weeks of starting work
Health			
Health assessments & or exercise fitness	Work with an external provider to assess overall health and develop an exercise program to improve fitness for life and work.	Employee	As identified and upon request
Hazard Reduction			
WHS Risk Registers	Identify and control MSD risks at a strategic, operational and site specific and make relevant information available to manage the risks.	Employee and Contractors	Annually reviewed
Take 5, SWMS, Safety Interactions and audits & inspections	Risk assessment and review tools to assist in the identification of potential MSD risks and behaviours and the measures to be taken to control the risks.	Employee and Contractors	On-going

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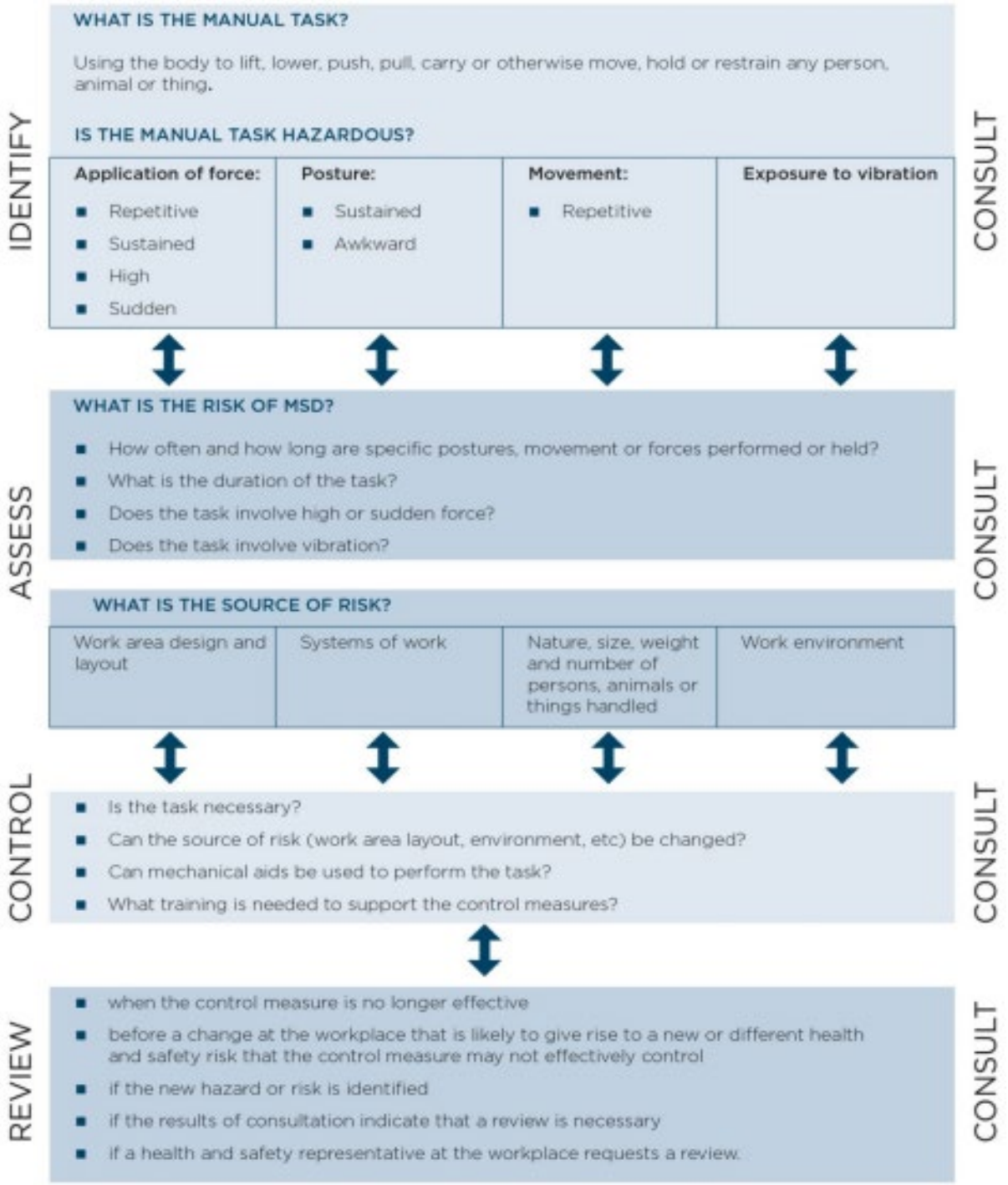
Biomechanical assessments	Biomechanical assessment services both in field and office-based locations identifying Hazardous Manual Tasks	Hydro Tasmania Group Assets	On-going
Musculoskeletal assessment	External service provider ascertains overall musculoskeletal movement and general fitness at site.	Employee	On-going
Initiative	Objective	Scope	When
Ergonomic/postural assessment	External service provider assessment to prevent aches, pains and poor posture from not having a workstation properly positioned.	Employee	On-going
Safety In Design - HazOps	Identifying and managing MSD risk from existing, new equipment and modifications to existing equipment.	Hydro Tasmania group Project Managers	Prior to initiating a project
Pre-purchase evaluation	Evaluating an item's entire life cycle to ensure MSD risks are reduced as far as reasonably practicable.	Procurers, planners, and schedulers	Prior to purchasing a defined item

Appendix 2: Risk management process for manual tasks



Appendix 3: Hazardous manual task identification worksheet

Business Area: Work area:

Date: Management representative:

HSE rep and/or workers taking part:

Task	Repetitive or sustained force	High or sudden force	Sustained or awkward postures	Repetitive movement	Exposure to vibration
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

Appendix 4: 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

- recurs 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 3 mths ☐ 3 mths to 1 yr ☐ 1 yr to 5 yrs ☐

Supervisor ……

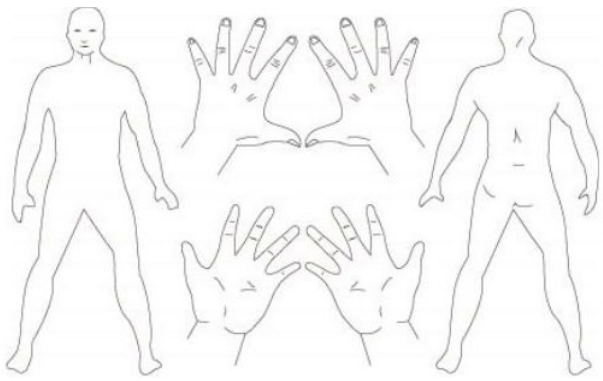
1. Do you suffer from swelling, numbness, tingling, 'pins and needles', stiffness, aches and pains in any part of the body? Indicate in the diagrams where the problem occurs.

2. Rate the level of discomfort/pain

1	2	3	4	5
Just noticeable		Moderate		Unbearable

What do you think caused the problem?

……



Appendix 5: Risk assessment worksheet

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	☐ Report of musculoskeletal disorder (MSD)
☐ New task	☐ New information	

Step 1—Does the task involve repetitive or sustained movements, postures or forces?

As a guide: Repetitive means the movement of force is performed more than twice a minute & sustained means the posture or force is held for more than 30 seconds at a time (Tick 'yes' each time you observe repetitive movement or sustained posture):

Postures and movements		Yes√	This action happens when …	Because (describe why)	If any boxes are ticked, what are possible controls to reduce the risk?
BACK					
Bending or twisting more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending more than 5 degrees	Backwards	☐			
NECK OR HEAD					
Bending or twisting more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending more than 5 degrees	Backwards	☐			

Postures and movements		Yes√	This action happens when …	Because (describe why)	If any boxes are ticked, what are possible controls to reduce the risk?
ARMS/HANDS					
Working with one or both hands above shoulder height		☐			
Reaching forwards or sideways more than 30cm from the body		☐			
Reaching behind the body		☐			
Excessive bending of the wrist		☐			
Twisting, turning, grabbing, picking or wringling actions with the fingers, hands or arms		☐			
LEGS					
Squatting, kneeling, crawling, lying, semi-lying or jumping		☐			
Standing with most of the body's weight on one leg		☐			
VERY FAST MOVEMENTS		☐			

FORCES (Place a tick in the 'yes' column each time you observe repetitive or sustained forces)	Yes√	This action happens when …	Because (describe why)	If any boxes are ticked, what are possible controls to reduce the risk?
Lifting or lowering	☐			
Carrying with one hand or one side of the body	☐			
Exerting force with one hand or one side of the body	☐			
Pushing, pulling or dragging	☐			
Very fast actions	☐			
Working with the fingers close together or wide apart	☐			
Applying uneven, fast or jerky forces	☐			
Holding, supporting or restraining anything (including a person, animal or tool)	☐			

Step 2 – Does the task in Step 1 involve long duration? (Tick yes if the task is done for)

DURATION	Yes	COMMENTS
More than 2 hours over a whole shift,	☐	
Continually for more than 30 minutes at a time	☐	
IF YOU TICKED YES, THE TASK IS A RISK AND MUST, BE CONTROLLED		

Step 3 – Does the task involve high or sudden force?

FORCES (Tick yes if the task involves any of the following high or sudden forces, even if the force is applied only once)	Yes√	This action happens when…	Because (describe why)	If any boxes are ticked, what are the possible controls to reduce the risk?
Lifting, lowering or carrying heavy loads	☐			
Throwing or catching	☐			
Hitting or kicking or jumping	☐			

FORCES (Tick yes if the task involves any of the following high or sudden forces, even if the force is applied only once)	Yes√	This action happens when…	Because (describe why)	If any boxes are ticked, what are the possible controls to reduce the risk?
Applying a sudden or unexpected force including: - handling a live person or animal or - applying uneven, fast or jerky forces during lifting, carrying, pushing or pulling, or - pushing or pulling objects that are hard to move or stop e.g., a trolley.	☐			
Exerting force while in a bent, twisted, or awkward posture including: - supporting items with hands above shoulder height or - moving items when legs are in an awkward posture, working with fingers pinched together or held wide apart, or - using a finger grip or pinch grip or an open-handed grip.	☐			
Exerting a force with the non-preferred hand	☐			
Needing to use two hands to operate a tool designed for one hand	☐			

FORCES (Tick yes if the task involves any of the following high or sudden forces, even if the force is applied only once)	Yes√	This action happens when…	Because (describe why)	If any boxes are ticked, what are the possible controls to reduce the risk?
The task can only be done for short periods of time	☐			
Two or more people need to be assigned to handle a heavy, awkward or bulky load	☐			
Workers report pain or significant discomfort during or after the task	☐			
Stronger workers assigned to do the task	☐			
Employees say the task is physically very strenuous or difficult to do	☐			
Workers think the task should be done by more than one person or seek help to do the task as it requires high force.	☐			

Step 4 – Is there hand, arm or whole-body vibration?

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

Environmental factors	YES
Driving for long periods	☐
Driving on rough roads	☐
Frequent use of hand powered tools or use for long periods	☐
Using high grip forces or awkward postures when using power tools	☐
Use of machines or tools where the manufacturer's handbook warns of vibration	☐
Workers being jolted or continuously shaken	☐
Use of a vehicle or tool not suitable for the environment or task	☐

Step 5 – Is there a risk?

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

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

Did you answer yes in step 3? **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 & 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 to Controlling the risks section)

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

Use the following flowchart to help you identify and implement relevant controls.

Manual Handling