Manual Tasks

HSEQ Operational Procedure

What this procedure describes

How to identify hazardous manual tasks and control the associated risk.

Why it is required

- This procedure assists TasNetworks employees, contractors and other workers to manage risks to health and safety from performing manual tasks.
- It incorporates the legal requirements provided in the Work Health and Safety (WHS) Act 2012 and its Regulations—especially Parts 3.1 and 4.2 of the WHS Regulations. This procedure should be used with Manual Tasks Training and tools.
- The procedure supports TasNetworks' goal of Zero Harm.

Who it applies to

This procedure applies to everyone working for or on behalf of TasNetworks.

Authorisation	
Issue date	
Authorised by	HSE & TC Leader
Review Cycle	2 years

Revision History	
Date	**Revision Details**
20/06/2018	General review – no changes

Contents

1. What are manual tasks?

'Manual tasks' is physical work activity. A manual task is any activity that requires a person to use any part of their musculoskeletal system when performing their work.

This can include the use of force for lifting, lowering, pushing, pulling, carrying or otherwise moving, holding or restraining any person, animal or thing.

Performing some manual tasks can be hazardous, potentially causing musculoskeletal disorders which can lead to injury.

Musculoskeletal disorders occur due to damage to tissues. This damage can occur in two ways:

- Accumulated repetitive loading of the body, even with very light tasks, over a period of time; and
- Immediate damage from very high forces and/or unexpected movements.

Manual tasks are the most common work health and safety risk facing TasNetworks workers, accounting for around 40 per cent of injuries.

A hazardous manual task is a task that requires 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:

- repetitive or sustained force;
- high or sudden force;
- repetitive movement;
- sustained or awkward posture; or
- exposure to vibration.

Hazardous manual tasks can injure muscles, tendons, ligaments, nerves, joints, cartilage, bones or blood vessels in arms, legs, neck, back or trunk. Most workers recover from musculoskeletal injury, however, some workers take a long time to get better and some workers never fully recover.

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- Accumulated repetitive loading of the body, even with very light tasks, over a period of time;
- Immediate damage from very high forces and/or unexpected movements.

Approximately 80% of workplace injuries result from accumulation of wear and tear by performing a range of tasks, rather than a single or one-off event.

Regulation 5 of the WHS Regulations:

Hazardous manual task is a task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing that involves 1 or more of the following:

- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture, and
- exposure to vibration.

2. Identifying manual tasks risks

Regulation 60 of the WHS Regulations:

A person conducting a business or undertaking [TasNetworks] must manage risks to health and safety relating to musculoskeletal disorder associated with a hazardous manual task in accordance with Part 3.1 of the Regulations [including the hierarchy of controls].

Consulting with workers, performing inspections and reviewing previous incidents, audits or inspections can identify manual tasks.

Engaging with workers is necessary at each step of managing the risks arising from manual tasks and consultation is also a requirement under WHS law. Workers who perform manual tasks can provide the most valuable information in combating injuries; they will be able to provide information on physical risks and potential injuries associated with their normal day to day tasks. For example, workers can help identify and recommend controls for tasks that are:

- difficult;
- very tiring;
- awkward;
- dangerous; or
- cause discomfort.

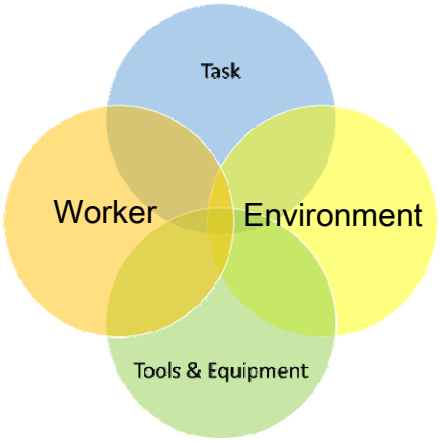
Other information, such as records of previous incidents or injuries or results of inspections, can also be used to identify injuries associated with manual tasks.

The risks of developing musculoskeletal disorders and injuries from manual tasks result not just from the hazards related to the specific, but also how the task is performed and the physical capabilities of individuals performing the tasks. Leaders therefore need to manage manual task risk by considering:

- the tasks that are being done and how they are being done;

- the tools equipment and objects workers are using;
- the work environment; and

whether individual workers can safely meet the physical demands of tasks, given their physical capabilities and pre-existing injuries.



The table below contains some manual tasks that may need to be managed.

Observing Work Tasks	Movements	Examples
Repetitive force	Using force repeatedly over a period of time to move or support an object.	• Gripping and stacking wood and debris into the back of a truck. • Lifting objects onto trucks or pallets.
Sustained force	Using force continually over a period of time.	• Holding down a trigger to operate a power tool. • Pulling items up poles or towers on lines.
High force	Particularly physically demanding work that involves exertion by the back, arm or leg muscle or by the hands and fingers.	• Fitting a Mark V cross arm to a pole. • Moving Brown Boveri switchgear
Sudden force	Jerky or unexpected movements while handling an item or load.	• Pulling ladders off the roof of cars.
Repetitive movement	Using the same parts of the body to repeat similar movements over a period of time.	• Typing and other keyboard tasks. • Installing insulation piercing connectors using a socket over a long period. • Using a screwdriver to install metering termination screws over a long period.
Sustained or awkward posture	Where the body is kept in the same position over a long time or held in an uncomfortable position.	• Working on underground cables. • Installing Boric fuses overhead using fuse stick. • Working off pole chairs.
Exposure to vibration	Vibration can be transferred through the whole body as well as through the arm and hand.	• Driving for long periods on roads with uneven surfaces in vehicles with inadequate suspension. • Using a chainsaw.

3. Assessing manual tasks

Use the TasNetworks manual handling risk assessments, manual handling guidelines, relevant work practices and Job Risk Analysis (JRA) to consider all the risks associated with a manual task.

Think about where a risk is occurring and why. Consider the following risks in particular:

- The work area design and layout – does the position of furniture and equipment require people to work in awkward postures? Will infrastructure be easily accessible by vehicles or lifting devices?
- The nature, size, weight or number of things handled in performing the manual task – are there bulky or difficult loads; or tools that are poorly maintained, badly designed or deliver impact over time?
- Systems of work – how often work is done, how long does it take, how capable and experienced are workers and what is the pace and amount of staff required to do the work?
- The work environment – objects can be harder to grip in hot, cold, windy or humid environments; and how suitable is the lighting? Will extremely hot conditions, snow or wind make performing a task difficult?
- Assessing worker capabilities – have all workers been asked if they feel comfortable performing the tasks, have the task-specific techniques and strategies that will be employed to control their risk of musculoskeletal disorders been discussed? Do any workers have pre-existing injuries or known physical limitations? Are any workers developing musculoskeletal symptoms or fatigue?

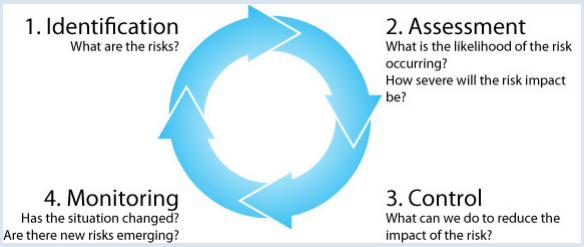
4. Control measures

Any identified risks need to be controlled using the hierarchy of controls. The hierarchy of risk control involves selecting the highest level of protection and reliability to the lowest. For example, workers are safer if equipment that is not suitable is never introduced to TasNetworks (elimination of a risk) rather than having to alter that equipment or purchase additional equipment to manage risk (engineering controls).

A number of hazardous manual tasks were assessed by an external contractor across TasNetworks in 2015 and a range of controls identified for each task. These risk assessments are published on the Health, Safety, Environment and Quality Info Zone in the 'Manual Handling' section.

'Reasonably practicable' is a term used to help people understand the extent of how to meet their duties under the WHS laws. All people at TasNetworks need to consider how reasonable the costs involved with controlling the risk are after assessing the extent of the risk and the ways of controlling it. Work through each of the levels below to manage risk, so far as is reasonably practicable, before considering the next. Sometimes a combination of controls will be needed to control a risk. Any remaining risk must be controlled in level 3, so far as is reasonably practicable.

Hierarchy of control		Examples of control measures
Level 1	Eliminate a risk  	• Automate the manual task (for example, use remote controls) • Deliver goods directly to the point of use to eliminate multiple handling • Use vehicles or winches to pull heavy items up towers • Store items at waist level to eliminate the need to bend when lifting.
Level 2	Substitute a hazard with something that is less of a risk 	• Purchase approved equipment that is lighter, smaller and/or easier to handle • Replace hand tools with power tools to reduce the level of force required to do the task •
	Isolate a hazard from people (e.g. using distance or barriers to separate a risk)	• Isolate vibrating machinery from the user, for example, by providing fully independent seating on mobile plant

Hierarchy of control		Examples of control measures
	Use engineering controls (e.g. using a mechanical device or process) 	• Use elevated work platforms • Use adjustable trolleys • Use a rail when racking out heavy switchgear • Install rams on vehicle ladders racks to assist with removal
Level 3	Use administrative controls (e.g. using work methods or procedures) 	• Using JRAs • Rotate workers between different tasks • Train workers to perform tasks safely (see Appendix A) • Change the order of tasks • Provide regular rest breaks • Break down boxes of insulators before lifting and carrying.
	Use personal protective equipment (e.g. footwear, eyewear and head protection)	• Use work gloves for gripping objects where required • Steel capped boots for workers performing construction activities

Remember, to give workers a reasonable opportunity to express their views and take those views into account before making decisions on health and safety matters.

5. Implementing control measures

To make sure control measures are effective:

- consult workers and supervise them performing manual tasks;
- regularly check that workers are using the control measures correctly – provide further training if needed and make any adjustments to control measures before making the arrangements permanent; and
- ensure that any equipment used in the manual task is properly maintained.

Do you have a good idea about how to control a risk? Let your team leader know or Health and Safety Representative know. Team leaders should forward ideas they have implemented successfully that may also help other areas of TasNetworks to a HSE Advisor.

Workers will be trained to control the risks associated with manual tasks. Workers should be trained at induction and must have on-going training when it is required. Training will be provided to:

- workers who perform manual tasks;
- managers, team leaders and supervisors who manage workers performing manual tasks; and
- health and safety representatives.

Together, HSE advisors, team leaders, managers and supervisors need to make sure workers are trained to:

- understand why manual tasks can be hazardous;
- how to perform manual tasks safely, including the use of mechanical aids, tools, equipment and safe work procedures; and
- how to report a problem or maintenance issues.

Team leaders, managers and supervisors need to regularly observe workers performing manual tasks and provide on-going training as required.

Refer to Appendix A for Manual Handling Techniques.

6. Ergonomics

Ergonomics involves fitting the workplace where possible to the worker and can help control the risks associated with manual tasks.

All employees have access to trained ergonomic champions who can provide ergonomic assessments. Assessments are arranged through the People and Performance Team.

On some occasions (particularly where a worker has a known condition), it may be necessary to use the specialist services of an allied health professional. These specialists can only be engaged with approval from the worker's manager.

Where a worker is authorised by their manager to perform their normal work functions from their home, they need to be able to access and use equipment that is suitable to their ergonomic needs. A checklist for people intending to work from home is available in the procedure for workplace conditions.

For further information or advice about ergonomics, employees can contact their People and Performance Administrator.

Purchasing equipment:

The purchase of new office furniture such as chairs, work stations and computer equipment must be coordinated through the Change Management Procedure. Specialised advice from an Occupational Therapist or ergonomist may be required to ensure the equipment is appropriate for use in the office environment and meets required standards.

7. Monitor and review

Control measures may be reviewed after consultation and considering information such as risk assessments, data on near-hits, incidents and incident investigation.

Specific responsibilities for monitoring and reviewing arrangements are covered in the responsibilities section of this procedure.

8. Responsibilities

We all have responsibilities to ensure that TasNetworks is a Zero Harm workplace. How everyone contributes to managing health safety and environmental matters in general is provided in TasNetworks' HSEQ Responsibilities procedure.

Some roles have other specific responsibilities detailed in the table below:

		Team members	Contractors	Visitors	TasNetworks Leadership Team	Leaders	HSE Leader	Group Leader HSE & Technical Competence
R	The person RESPONSIBLE for doing or delegating the action							
A	The person who as ultimate responsibility and APPROVES the action							
S	The person require to provide SUPPORT to achieve the action							
C	The person who must be CONSULTED during the action							
I	The person who must be INFORMED and trained regarding the action/ or outcome.							
Compliance with this procedure		A R	A R	A R	A R	A R		A R
Approves training materials and resources		S C	I	I	I	C	A R	C
Consult workers when identifying, assessing, controlling and reviewing manual task risk		S C	C	I		R	R S	S
Check control measures are suitable, fit		C R	C R			A R	S R	S

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C	The person who must be CONSULTED during the action							
I	The person who must be INFORMED and trained regarding the action/ or outcome.							
for purpose and being used correctly.								
Need to regularly check control measures before changes occur, when new hazards are identified or when review is required.		C R	C R			A R	S	S
Where the position description for a role requires workers to be physically fit in order to perform certain tasks safely, workers need to have and maintain those requirements.		R A	R A			I		
Inform leaders if work cannot be performed safely in accordance with this procedure, manual handling guidelines or risk assessment.		A R	A R			C		
Consult People and Performance, the HSE team and leaders to support and manage sustained or reoccurring instances of the above.		C I	C I			A R		
Support team leaders, supervisors, workers and managers with advice, resources and group training to manage the risks associated with manual tasks.		I	I				A R	

9. References

The following documents were reviewed as part of developing this procedure:

Legislation	
Work Health and Safety Act 2012 and Regulations 2012 (Tas)	
Codes of practice, Industry codes, etc.	
Hazardous Manual Tasks	Code of Practice, Work Safe Tasmania
Work Health and Safety Consultation, Communication and Co-ordination	Code of Practice, Work Safe Tasmania
TasNetworks documents	
HSEQ Consultation and Communication Procedure	R27738
Other documents/ resources	
Work Safe Tasmania	http://worksafe.tas.gov.au
Safe Work Australia	http://www.safeworkaustralia.gov.au

10. Glossary

Hazardous manual task – a task that requires 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:

- repetitive or sustained force;
- high or sudden force;
- repetitive movement;
- sustained or awkward posture; and
- exposure to vibration.

Hierarchy of control – a method of controlling risks from the highest level of protection and reliability to the lowest. The WHS Regulations require TasNetworks to work through this hierarchy to choose the control that most effectively eliminates or minimises the risk in the circumstances.

HSE – Health Safety and Environment

HSEQ – Health Safety Environment and Quality

HSR – A person elected in accordance with the WHS Act 2011 to represent workers in a workgroup on work health and safety matters. This person will also represent workers on environmental and sustainability matters.

Officer – A senior executive who makes, or participates in making, decisions that affect the whole, or a substantial part, of the business or undertaking. It can include a director or secretary of the corporation, an officer of the Crown or an officer of a public authority.

JRA – Job Risk Analysis

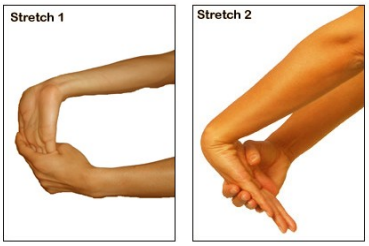
Worker – A worker is someone who carries out work for TasNetworks. It includes employees, outworkers, apprentices, trainees, students gaining work experience, volunteers, contractors or subcontractors and their employees.

Appendix A: Manual Handling Techniques

Manual handling techniques can minimise the risk injury. The information in this appendix should is for general guidance, you will need to consider the best techniques to use when assessing risk (for instance, when completing your JRA). These techniques are an administrative control measure, risks must be either eliminated or minimised using more reliable measures in the first instance. Refer to the hierarchy of control in this procedure for further information.

Pushing, pulling and forceful gripping

- Push rather than pull a load. It involves less work by the muscles of the lower back, and generally allows better visibility.
- When moving a load, know where it has to stop and slow down gradually. Choose a route with the best surface conditions, and avoid doors that have to be held open while the load is carried through it.
- When gripping, use a 'shake hands' position for maximum grip strength. Choose hand tools suited to the task, and with handles that allow a power grip.



- If necessary (such as in cold conditions), wear well fitted gloves.
- Perform forearm stretches after gripping tasks that are forceful or repetitive. Holding for 15 seconds each.
- Ask for help if you need it.

Lifting

- Keep the curve in the lower back and use a functional squat technique to maintain a neutral spine.
- Engage your core muscles with abdominal bracing.
- Bend your knees and hips, but keep the knees from moving forward past the toes.
- Love the load by keeping it close to your body.
- Keep your wings in by keeping elbows next to the torso and elbows below shoulder height.
- Lift the weight using your legs.
- Avoid twisting, jerking, awkward or uncomfortable postures.
- Ask for help if you need it.

Team lifting

Team lifting may be effective in reducing risk in certain manual handling tasks, for example, when handling bulky or awkward loads.

- Co-ordinate and carefully plan the lift.
- Make sure team members have a similar capacity and know their responsibilities during the lift through training.
- Make sure there is an adequate number of people to perform the lift.
- Appoint one person to coordinate the lift.

- Rehearse the lift and make sure team members know what to do in case of emergency.

Working postures

Back

- Place tools and other work items so you don't need to bend forward or reach.
- Design suitable work heights and provide adequate knee and foot clearance.
- Avoid bending and/or twisting your back by keeping your nose over your toes.
- Tilt work surfaces or use spring-loaded surfaces.
- Have enough room to turn your feet when placing a load at a different angle.
- Use micro-breaks to unload the back muscles with a postural reversal.

Neck

- Avoid bending forward excessively or protruding or straining your neck. Use an inclined work surface.
- Work with documents or displays directly in front of you.
- Avoid holding the neck in inclined, flexed, or rotated postures for long periods. Move the neck in the opposite direction at regular intervals to allow muscles to rest and recover.

Legs and knees

- Reduce the need to kneel, for example, by working at waist or hip height. If this is not possible, kneel on a cushioned surface where possible.
- Move around during manual tasks instead of standing for long periods.
- Do not keep one foot fixed on the ground when turning to avoid twisting the knee.
- Keep knees aligned with the foot when squatting.

Arms

- Avoid working with the arms held away from your body or with elbows above shoulder height.
- Modify equipment or provide a platform so you work at the correct height (don't need to lift your arms).
- Use arm supports for precision work.
- Avoid rotating the forearm and wrist.
- Use tools that reduce the need to turn your forearm.

Repetition and static positions

- Change the task order, alternate repetitive tasks with non-repetitive tasks.
- Employ job rotation so workers move between tasks using different muscles.
- Restructure the job to allow for more variety.
- Allow for adequate recovery, for example, take regular rest breaks.