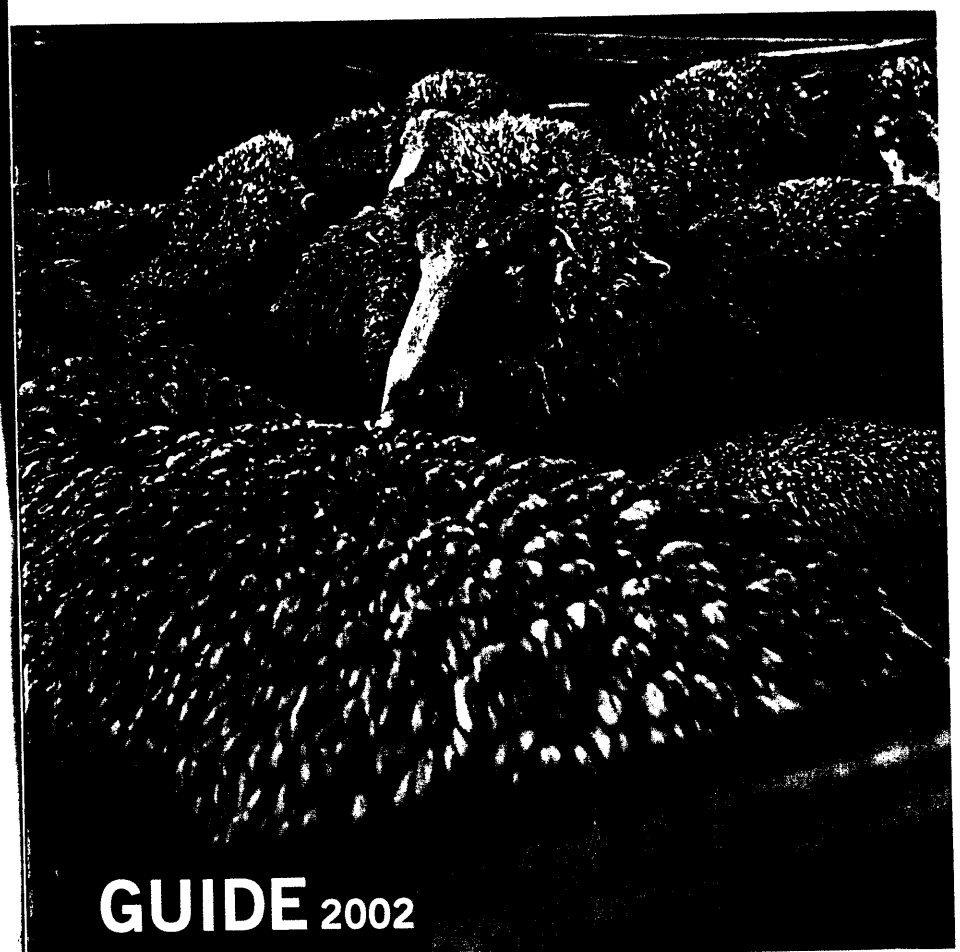
WorkCover NSW
Locked Bag 2906, Lisarow NSW 2252. Workcover Assistance Service 13 10 50
Email contact@workcover.nsw.gov.au Website www.workcover.nsw.gov.au
Catalogue No.692 ISBN: 1 920730 12 5

HEALTH AND SAFETY AT WORK

SHEARING



GUIDE 2002

Acknowledgements

Working party

Dr. Lyn Fragar (Australian Centre for Agricultural Health and Safety)
Duncan Fraser (NSW Farmers/Farmsafe NSW)
Terry O'Connor and Mick Madden (AWU)
Brent Turner and Tony Robinson (WorkCover NSW)

Review and technical feedback

P. Bentley-Howard - Head Teacher - Sheep & Wool - Western Institute of TAFE - Dubbo
R. Baldock - Lister - SA
G. Crisp - Heiniger - NSW
H. Goring - AWU - Griffith
W. Harbour - Lyco - Vic.
M. Lawrance - Occupational Therapist - Vic.
C. McPherson - Wool classer - Wagga Wagga
W. Murray - NSW Agriculture - Trangie
D. O'Hare - Shearer - Wagga Wagga
G. Perkins - Wool Industry Training Australia - Dubbo
E. Scarlett - State Ectoparasite Co-ordinator - NSW Agriculture - Albury
S. Seaman - NSW Agriculture - Bathurst

WorkCover NSW - Rural Industry Team, Compliance Coordination Team, Industry Strategies Unit, Legal Services Branch, Workplace Injury Management Branch.

Foreword

This Guide has been produced as part of WorkCover's ShearSafety program. Injury to shearers account for approximately 14.8% of all agricultural sector workers compensation claims with an annual cost of approximately $4.6 million in the year 1999/2000. The ShearSafety Program is designed to assist both shearers and wool-growers of NSW in making their workplaces safer.

The Guide was developed in consultation with key industry stakeholders, including NSW Farmers, Australian Workers Union, Shearing Contractors Association of Australia and NSW Farmsafe.

WorkCover will monitor the implementation of this Guide and review both the Guide and the Rural Workers Accommodation Act in 2003. This review will be conducted in consultation with industry stakeholders. After this review and consultation has taken place, it is intended that the Guide be re-published as an Industry Code of Practice.

How to use this information

What is this Guide about?

This Guide provides advice on specific hazards associated with shearing, crutching and associated work. It also provides advice on common hazards found in the shearing shed and yards. It is intended to assist employers in identifying the hazards, determining how serious the risks from those hazards are, and the most effective means of eliminating or controlling those risks.

This guidance should be read in conjunction with the OHS Act 2000 and the OHS Regulation 2001.

Who is this Guide for?

This Guide is for employers, managers, health and safety representatives, OHS committee members, employees, unions and employer organisations to assist them to manage risks arising from shearing, crutching and associated activities.

When to use this information?

Use this Guide, in consultation, to assess the effectiveness of your present arrangements for shearing, and to check that all sources of risk have been identified and controlled. If you are setting up a new shed, this Guide should be your systematic guide to establishing a program to manage the hazards arising from the work.

What do the symbols in the Guide mean?

To help you work out what you require, a number of symbols are used to highlight things you need to take into account and tools to help you do the job.


Legal obligations that must be followed


Assess the risks in your workplace


Consult and communicate


Tools that can help you work out your plan


The results of the process of finding things that cause harm, working out how big a problem they are and then fixing them


Questions you might ask


Things you should know

CONTENTS

	PAGE
1 Introduction	4
1.1 Purpose	4
1.2 Scope	4
1.3 Interpretation	4
1.4 Consultation at the workplace	5
2 Risk management: establishing the special needs of your workplace	6
2.1 Managing risks in the workplace	6
2.2 Training and induction	11
3 Responsibilities and coordination	14
3.1 Concurrent responsibilities	14
3.2 Co-ordination	15
3.3 Workers compensation, injury management and rehabilitation	16
4 Identification, assessment and control	19
5 Work premises	20
5.1 Yards and races	20
5.2 Worker access to the shed and work-station	21
5.3 Sheep entrance/ramp	22
5.4 Pen gates	22
5.5 Holding and filling pens	23
5.6 Catching pens	24
5.7 Catching pen doors	25
5.8 Catching pen location	26
5.9 Shearing board	27
5.10 Wool room	29
5.11 Loading areas	31
5.12 Dimensions	31
5.13 Lighting	32
6 Manual handling, fitness and fatigue	34
6.1 Manual handling	34
6.2 Fitness for work	36
6.3 Fatigue	37
7 Work practices	39
7.1 Shearing, crutching and associated animal handling	39
7.2 Picking up	40
7.3 Wool skirting/rolling/classing	40
7.4 Mobile crutching	41
7.5 Shearing goats and alpacas	42
8 Plant	43
8.1 Overhead gear and shearing plant	44
8.2 Handpiece	46
8.3 Grinder	48
8.4 Wool press	50
9 Hazardous substances and dangerous goods	51
9.1 Hazardous substances	51
9.2 Dangerous goods	53
9.3 Personal protective equipment	55
10 Animals and disease	56
10.1 Yarding sheep for shearing	56
10.2 Residues	57
10.3 Size and type	59
10.4 Zoonoses	59
11 Working environment	61
11.1 Electrocution	61
11.2 Noise	63
11.3 Temperature	65
11.4 Atmosphere	68
12 Emergency response and first aid	70
12.1 Emergency response	70
12.2 First aid	71
13 Amenities, accommodation and travel	73
13.1 Amenities	73
13.2 Accommodation requirements	73
13.3 Travel to the property	77
13.4 Travel on the property	78
14 Appendix 1 - Further information	79
14.1 Contacts	79
14.2 Legislation	80
14.3 Standards	80
14.4 Codes of practice	82
14.5 Workcover guides	82
14.6 Shearing	82
14.7 Shed design	83
15 Appendix 2 - Shearing assessment checklist	84
16 Appendix 3 - Risk control work-sheet	91
17 Appendix 4 - Zoonoses symptoms	92
18 Appendix 5 - Definitions	95
19 Appendix 6 - Glossary of terms	97

1. INTRODUCTION

1.1 Purpose

This document provides guidance to prevent injury to persons engaged in shearing, crutching and related activities.

This is a Guideline document relating to the shearing industry. It includes some of your obligations under occupational health and safety and workers compensation legislation. It contains suggestions and references as a guide only. To ensure you comply with your legal obligations you must refer to the appropriate Acts.[1]

1.2 Scope

This Guide applies to all workplaces in NSW where sheep, goats and alpacas are shorn.

The document covers only the workplace of the shearing shed and associated yards and the work immediately related to shearing. Other husbandry and farm operations are covered elsewhere. (See Appendix 1 - further information)

1.3 Interpretation

Legal requirements

Words such as "must", "requires" and "mandatory" indicate legal requirements with which the relevant person, usually the employer, must comply.

Recommended practices

Words such as "should", indicate recommended courses of action. "May" or "consider" suggest a possible course of action which the duty holder should consider. However, they may choose an alternative method of achieving a safe system of work.

[1] You should also be aware of the requirements of the appropriate State and Industry Awards and enterprise agreements.

1.4 Consultation at the workplace

The information in this Guide should be used when consulting with employees about the hazards encountered in shearing and related activities. Involving employees in identifying hazards and solving health and safety problems is an essential step in making the workplace safe and healthy.

The Occupational Health and Safety Act 2000 (OHS Act) and the OHS Regulation 2001 (OHS Regulation) require employers to consult with employees and take into account their views when making decisions that affect their health, safety and welfare.

1.4.1 What is meant by Consultation?

Consultation involves sharing information with employees, giving them the opportunity to express their views before decisions are made, valuing their views and considering them.

Consultation is based on recognition that employee input and participation improves decision-making about health and safety matters. Consultation will assist in developing safe systems of work based on the identification of hazards that may be present and the assessment of the risks these hazards might give rise to.

Consultation must occur under the following circumstances:

- when changes that may affect health, safety or welfare are proposed to the
  - work *premises*
  - systems or methods of work; or
  - *plant* or substances used for work
- when risks to health and safety arising from work are assessed
- when decisions are made about how to eliminate or control those risks
- when introducing or altering the procedures for monitoring those risks
- when decisions are made about the adequacy of facilities for employee welfare
- when decisions are made about the procedures for consultation.

Employers must establish an OHS consultation mechanism and need to consult employees about what the consultation arrangements are going to be.

Employers should also record the consultation arrangements and publicise them to all existing and new employees.

You should refer to WorkCover's Code of Practice: *Occupational Health and Safety Consultation* for detailed guidance regarding employer obligations related to consultation.

2. RISK MANAGEMENT: ESTABLISHING THE SPECIAL NEEDS OF YOUR WORKPLACE

The provisions of the Risk Management part of the Regulation (Chapter 2) apply to all hazards in all workplaces. There are no exclusions or exemptions from the requirements of this Part.

Obligations imposed by this Risk Management Chapter of the Regulation remain the responsibility of the employer, regardless of any delegation or contracting arrangements that may be made for the carrying out of actual tasks associated with the obligation.

Employers must identify any foreseeable hazards, assess their risks and take action to eliminate or control them. Employees must be consulted as part of this process.

2.1 Managing risks in the workplace

Under the OHS Regulation, all employers must use a "risk management" approach to address workplace health and safety issues.

These safety issues may arise when employers are considering purchasing plant or substances, developing or changing work systems, and designing or re-modelling the shed or yards.

The Regulation requires employers to:

- identify the hazard
- assess the risk(s) to the health and safety of persons arising from the hazards
- use appropriate control measures to eliminate or control the risk
- monitor and review the *control measures* to ensure on-going safety.

These are the key elements of a risk management process and should be done in consultation with the people most likely to be affected, such as employees and contractors.

Consultation is basic to effective safety management and is required for all workplaces. It makes sense to consult with workers, because these people are likely to be aware of the particular risks at their workplace and may have good ideas about how to eliminate or control the risks.

Employers should adopt a systematic approach to managing safety. Developing and implementing written policies, *risk assessments, safe work procedures* and assigned responsibilities can contribute to the development of a safe system of work and help employers to show their commitment to meeting their *duty of care* under the OHS Act.

2.1.1 Identifying the hazards

An employer must identify any foreseeable health or safety hazards, which could harm the employee or other persons in the workplace. The hazards may involve people, equipment, materials and environment. Some ways to identify hazards include:

- A walk-through of the workplace. This is a simple visual check, which may be assisted with the use of a site plan or map. Use of Appendix 2 - shearing assessment checklist (p.84), will assist in ensuring that all essential areas are examined.
- Looking at the way work is done. The essence of an assessment is the direct observation of jobs being done.
- Consultation with workers as described in Section 1.4.
- Looking at the workplace records on "near misses", incidents, accidents and injuries. Larger organisations make use of injury/illness and "near miss" records to identify human health hazards and to define risk levels. Most wool producers will not have sufficient experience of injury from one shed to define the problems.
- Information supplied by manufacturers and suppliers about the proper use of *hazardous substances* and plant (for example: Material Safety Data Sheets, product labels and manuals) is a helpful source of information.
- Seeking information from outside sources. (Appendix 1 - further information)

It is a good idea to list the hazards, identifying the form in which the hazard occurs, where it occurs, things that contribute to the hazard and the persons likely to be exposed to the hazard.

This can be used to develop a safety plan and can help in developing safe work procedures.

2.1.2 Assessing the risks

To assess the level of risk that a hazard poses and determine priorities for action, it is helpful to consider these questions:

- **How commonly do injuries/illnesses associated with this hazard occur?**
- **How often, and for how long are people exposed to this hazard?**
- **How severe, or costly, are these injuries likely to be?**

Risk assessment must be done in consultation with employees and involves looking at the:

- risks that any identified hazard can cause to an employee or other person in the workplace
- likelihood of an injury or illness occurring
- likely severity of any injury or illness that may occur.

You should also read any available health and safety information related to the hazard; identify the factors that might contribute to the risk, and identify the actions necessary to control the risk. (Appendix 1 - further information)

You should think about such things as the:

- potential sources of injury and illness
- number of people involved
- type of work to be performed
- work practices in use
- type of plant, machinery and equipment to be used
- premises and working environment including their layout or condition
- capability, skill, experience and age of people doing the work.

You should make a list of the potential injuries and diseases that can occur, and list them from the most to the least serious, for example "death by crushing" to "abrasion". The most serious risks are the ones that should be dealt with first. One way to rank or prioritise the risks in your workplace is to use a matrix like Table 1.

For each hazard you have identified you could rank it according to the likelihood that it will occur and how serious the result could be. Thus an event that is very likely to occur and could kill or disable someone would be a top (#1) priority. It should be addressed first. One that is unlikely to happen and would only need minor first aid treatment if it did happen, would be a low (#6) priority, and could be taken care of after more serious risks that have been addressed.

Table 1 - Risk Assessment

How likely is it to hurt someone?	**How severely could it hurt someone?**			
	Kill or disable illness	Serious injury or long term illness	Medical treatment and several days off work	Minor first aid treatment
Very likely - could happen any time	1	1	2	3
Likely - could happen sometime	1	2	3	4
Unlikely - could rarely happen	2	3	4	5
Very unlikely - could happen, but probably never will	3	4	5	6

The highest risk (#1's) should be the highest priority

2.1.3 Eliminate or control the risks

This step involves working out how to eliminate or control the risks.

Employers must eliminate any risk to the health and safety of all employees or other persons at the workplace. If it is not reasonably *practicable* to eliminate the risk, the employer must control the risk. The employer is responsible for ensuring risks are controlled, and that the method of control is working. Appendix 3 - risk control work-sheet (p.91) will help with this step.

The employer's obligation to control a risk to health or safety (in any case in which the elimination of the risk is not reasonably practicable) is an obligation to take the following measures (in the order specified) to minimise the risk to the lowest level reasonably practicable. A combination of the measures is required to be taken to minimise the risk to the lowest level reasonably practicable if no single measure is sufficient for that purpose.

Level 1

Eliminate the Hazard

This control measure is not often available, but must always be considered first. It could be that abandoning the woolshed and using a neighbouring, safer, better shed is the most cost-effective solution!

Level 2

(a) *Substituting* the hazard giving rise to the risk with a hazard that gives rise to a lesser risk. A new wool press may have reduced the hazards, but still present some risk. Changing the work layout for one, e.g. the wool classer, may create another, but lesser hazard for another group, e.g. the wool pressers.

(b) *Isolating the hazard* from the person put at risk.
Consider separating the hazard from people not involved in the work or the general work area. This could be done with walls, screens or other barriers

(c) *Minimising the risk by engineering means.*
Modifications like guarding of machinery, isolation of the noise hazard from workers, improved woolshed design with *raised boards*, more efficient *pen* arrangements etc. are all examples of engineering or design control options.

Level 3

Minimising the risk by administrative means (for example, by adopting safe working practices or providing appropriate training, instruction or information).

Where the hazard cannot be removed or reduced using the above principles, then establishment of work rules or practices may be the only option. These measures will generally be the least effective, as humans will, in some circumstances, become thoughtless, take a short cut or even deliberately deviate from safe practice. However, where such measures are considered the best option, it is important that all workers have appropriate orientation to the "rules" and are trained how to work safely within them.

Level 4

Using personal protective equipment. (PPE)

If measures taken by an employer to control a risk include the use of personal protective equipment, the employer must provide each person at risk with appropriate personal protective equipment and training as to its use and maintenance.

This option should only be used when no other control measures are practical or when it is necessary to increase protection in combination with other control measures. See Section 9.3. You should be able to justify why *PPE* was used instead of other control measures.

Controlling risks

You should select from the highest level possible. Measures higher in the order are the most cost-effective. Often a combination of the strategies used simultaneously to minimise the risk to the lowest level reasonably practicable is the best option to be taken, if no single measure is sufficient for that purpose.

You may consider the following when deciding what control measures to use:

- the nature of the stock, the number to be shorn or crutched and the physical environment where the work is to be done
- the nature of the work or work process
- the severity of any potential injury or disease
- understanding of the relationship of the injury or disease to the work or process
- information available about methods of preventing injury or disease associated with a particular hazard or risk
- the availability and suitability of methods to prevent, remove or control causes of injuries or diseases associated with a hazard or risk.

Any new control measures should be evaluated to ensure that they are effective and safe and that they create no new hazards. Also, develop clear work procedures and make sure they are written down and available to employees.

2.1.4 Keeping your workplace safe - monitor and review

OHS risk management is an ongoing process. It is a pivotal part of overall business management and just like other business activities should be checked and reviewed. To ensure that a workplace stays safe an employer should review the risk assessments undertaken. This will occur whenever:

- there is evidence that the risk assessment is no longer valid
- an injury or illness occurs because of a hazard that the risk assessment addressed; or
- a change is planned to the place of work, work practices, or work procedures that the risk assessment addressed.

Whenever circumstances that may adversely affect health and safety change, the process of identification, assessment and deciding control measures should be repeated. Where a

safety plan is updated, workers affected by the change should be consulted and informed of new requirements. This is part of a continuous improvement process, which is fundamental in assuring health and safety is maintained.

You must follow these steps for every health and safety issue that requires attention:

- **identify the Hazard**
- **assess the Risk**
- **fix the Problem**
- **review Results.**

For shearing and related tasks, this method provides a systematic way of working out the most effective action to control all possible risks.

2.2 Training and induction

The OHS Act 2000 (Part 2) requires employers to provide such information, instruction, training and supervision as may be necessary to ensure the health, safety and welfare of their employees while at work.

Training is one of the most important ways to ensure workers stay competent, productive and safe.

The OHS Regulation (Clause 13) requires employers to ensure that employees receive certain specific types of training. For example, employers are required to provide induction training for all new employees. They should also ensure that members of OHS Committees and OHS representatives receive OHS Consultation training.

Workers should be trained to apply systems of work and work practices, that are safe and without risks to health. An employer should make sure that all employees have been adequately trained and instructed to perform their work safely BEFORE they commence work. Workers should be made aware of any dangers involved with their work and of any safety precautions that should be taken to avoid accident or injury.

Make sure that every employee who uses plant - any machine, equipment or appliance - has had adequate information and training to use it safely. Employees should be provided with competent supervision while they use this equipment unless they are capable of operating it safely without supervision.

Consider assessing the particular training needs of employees based on the kind of work being done, the equipment being used, the environment and the hazards that may be encountered, and the experience and skill of the workers. Particularly, consider the needs of those workers with lower literacy levels or from a non English speaking background.

For example, "Learner" shearers will have different requirements to shed hands. Training in emergency and evacuation procedures for all workers should also not be overlooked.

It is a good idea to document worker certification and accreditation as well as any training provided including the nature of the training, the date the training was given, and the names of the persons who were trained.

The OHS Act and the OHS Regulation set out specific requirements for training and related record keeping. The tables that follow list many of the requirements and identify other training that employers should consider. Employers should refer to the Act and the Regulation for specific requirements.

2.2.1 Training Required by the OHS Regulation

NOTE: The table below identifies the primary requirements, and is not intended to represent an exhaustive listing. Employers should refer to the Regulation itself to ensure they are familiar with their requirements.

Table 2 - Required Training

Required Training Areas	Who for	Examples
Induction training for new employees, covering: • Workplace arrangements for managing OHS and reporting hazards to management, health and safety procedures, including the use and maintenance of risk control measures • How employees can access any health and safety information that the employer is required by the OHS Regulation to provide • Any other matters relevant to the workplace, given the competence, experience and age of the employee *(OHS Reg 2001, Clause 13(1), Chapter 2)*	All new employees.	• Agreed means for consultation to identify hazards and assess and eliminate or control risks. Identify whom to report hazards to. • Systems of work, safe work procedures, communication methods, emergency and first aid responsibilities and procedures. • Effective use and maintenance of personal protective equipment (PPE) • Where to find Material Safety Data Sheets *(MSDS)* & emergency procedures related to plant eg wool press.
Any information, training and instruction about risks at the place of work, necessary to ensure their safety *(OHS Reg 2001, Clause 13(2), Chapter 2)*	All persons who may be exposed to a risk	Identified hazards and agreed methods of control; communication requirements, stock, plant, environment and work practices.
At a minimum, trained first aid personnel are required where more than 25 people are at a place of work. However employers should take into account the location of the workplace, number of workers there and the type of work undertaken, to determine the number of trained first aid personnel required *(OHS Reg 2001, Clause 20, Chapter 2)*	Relevant personnel	• First aid certificate from a WorkCover approved first aid course • Occupational first aid certificate from a WorkCover approved occupational first aid course • Specific training to deal with medical emergencies that may arise in the course of wool harvesting activities
Training for OHS committee members and representatives, provided by a WorkCover accredited trainer or appropriate registered provider. Records must be kept for this training *(OHS Reg 2001, Clause 31, Chapter 3)*	OHS committe members and OHS representatives	• Importance of OHS consultation and systematically managing OHS • Consultation requirements under the OHS Act • Effective communication techniques • Requirements for OHS Management Systems • Practical application of risk management • Continuous improvement of OHS systems
Training in manual handling techniques, correct use of mechanical aids and team lifting for work activities where it is not reasonably practicable to eliminate the risks arising from manual handling *(OHS Reg 2001, Clause 80, Chapter 4)*	All workers whose activities expose them to risks from manual handling	All workers, particularly shearers.
Training in use of plant, and supervision to the extent necessary to minimise the risks to health and safety *(OHS Reg 2001, Clause 136, Chapter 5)*	All users of plant	All operators should provide evidence of competency attainment.
Other Training That May Be Considered		
Site specific induction training	All supervisors and workers when entering a new work site.	Site-specific information, location of emergency stops, operation of plant, location of emergency gear, evacuation procedures and health and safety requirements of the employer and owner of the site.
Training in the safe use and storage of *dangerous goods* and hazardous substances	Relevant personnel who may be exposed	Reading and following first aid advice on MSDS; use of PPE
First aid training	All personnel	Given the frequent isolation of shearing sheds and remote work such as crutching, first aid training for all workers
Any additional task specific training necessary to ensure that workers are competent to do the required work.	All personnel	Training in accordance with Industry Competency Standards (RUA98)

3. RESPONSIBILITIES AND COORDINATION

Safe and successful completion of any work involved with shearing stock, and the pressing and loading of wool will depend greatly on adequate co-ordination and allocation of responsibilities, even before work in the shed begins. This chapter discusses the means by which this may be done.

The OHS Regulation requires that if more than one person has responsibility with respect to a particular OHS matter, each person retains responsibility for the matter and that the responsibility is to be discharged in a coordinated manner.

3.1 Concurrent responsibilities

It is essential that all persons involved in the work understand their health and safety responsibilities.

Because OHS legislation places responsibilities for health and safety on a range of people, all those involved need to know and follow their legal obligations.

The OHS Act places a *duty of care* on employers for the safety of their employees and other persons in the workplace. The responsibilities extend to cover non-employees while they are at the employers' place of work.

A person who employs persons under contracts of employment or apprenticeship is an employer. The nature of employment may be permanent or temporary, for example during the shearing season. Self-employed persons also have responsibilities under the OHS Act 2000.

Employees themselves have a responsibility to follow safe working procedures and they should take care not to endanger other persons in the workplace.

Under the NSW occupational health and safety legislation, controllers of work premises, plant or substances also have health and safety responsibilities. They should make sure that the premises used as a place of work (which includes land) plant and substances are safe and without risks to health when properly used. The OHS Act imposes this requirement on persons who have only limited control of the premises, plant or substances, and states that their responsibilities apply only to those matters over which they have control.

Within the shearing industry, employment relationships are often complex. Sometimes a shed owner may have a contract with a shearing contractor who will employ shearers for the job. In other cases, a grazier may directly employ the shearers or "borrow" or rent a shed belonging to someone else.

The complexity of such relationships may appear to blur the lines of responsibility for matters affecting health and safety at shearing. However, the thing to remember is that

responsibility for health and safety **cannot be contracted out**. It is shared among all the parties involved in the operation. A few points might help make this clear:

- the person in control of the place of work has obligations, not only to his direct employees, but also to the contractors, their employees and visitors to the workplace
- the level of responsibility for health and safety matters is related to the amount of control the person has over the matters, regardless of the number of contractors and subcontractors involved
- information about health and safety matters, including hazards like machinery should be passed along to those persons who may be affected by these matters
- employees who may be affected by hazards should be consulted when deciding how to eliminate or control the risks.

3.2 Co-ordination

Never assume that someone else is taking care of a health and safety matter. NSW legislation requires that if a number of people have responsibility for a particular OHS matter, each person retains responsibility for the matter and that the responsibility is to be discharged in a co-ordinated manner.

There are several ways to do this. One way is for the person in control to consult with their own employees and any contractors involved in the operation. They could use this as an opportunity to indicate their safety requirements and policies, review the job to be undertaken, safety issues that may arise and other matters.

All persons involved with shearing and associated work should be clear on their responsibilities and expectations, and that they have taken steps to meet their health and safety obligations.

The example that follows shows how this might be done.

Suppose a contractor has been engaged to organise a team to work for a period at a particular shed. He/she would need to find out the location of the shed, the available facilities, number and type of sheep, any time constraints; then calculate and engage the employees required to do the job.

The contractor is aware that he/she is basically in control of the operation and the work site and he/she wants to make sure that no one gets injured. He/she meets with the employees and the owner to discus safety issues. The contractor wants to make it clear that all involved understand and obey their safety obligations. In fact, there may even be a clause in the contract requiring all parties to comply with health and safety requirements and to ensure that the work will be done safely.

The owner should ask to see evidence of safe work procedures and about supervisory arrangements to see that the procedures are followed. The owner asks how the contractor ensures that employees are competent to do their tasks. He/she asks about training and in the end should be confident that the contractor has done all they can to make sure that workers are competent at their jobs and aware of the steps they need to take to prevent accidents and injuries.

Finally the contractor and the owner agree to meet at the site to look over the shed, yards and stock, assess the conditions there and plan how the job will be done.

They will go over the equipment and methods to be used, identify any foreseeable hazards and how to deal with them.

They will talk about the best ways to get the job done efficiently and safely and how to ensure it happens that way.

3.3 Workers compensation, injury management and rehabilitation

Anybody who operates a business and has employees or engages contractors should take out, from a licensed insurer and keep current, a workers compensation insurance policy covering all their workers (Section 155 Workers Compensation Act 1987).

If the sheep owner is engaging a contractor who has their own employees to carry out the work, the contractor should have current insurance for their shearers, or the owner may be liable. In this case, it is recommended that the owner should also maintain a minimum cover policy if he/she engages contractors yet does not employ anyone. This type of policy protects the owner in case the contactor does not hold, or is not required to hold a policy. A principal who engages a contractor with their own workers should always check that the contractor has workers compensation insurance.

If the contractor does not employ workers i.e. does the shearing him or her self, the owner or principal of the business, who engages the contractor, has a similar level of control over the contractor as that over a direct employee. The owner or principal has a duty of care to the contractor and should hold a minimum cover policy as a claim can be made directly against the principal.

The penalties are severe for failure to have current workers compensation cover and may include significant financial penalties, or imprisonment, or both.

If owner or principal of the business employs a worker, or a contractor who does not sub-contract the work, the owner or principal has a duty of care and should have insurance.

If the contractor does employ workers i.e. has others working for him or her, the contractor should have insurance for those workers.

3.3.1 Advice and injury management obligations after an injury.

An employer must:

- notify their workers compensation Insurer **within forty-eight hours** of becoming aware of any workplace injury or incident where a worker will be unable to perform their normal duties (or hours) for a continuous period of more than seven days (whether or not the worker is rostered on for those 7 days).

- notify their insurer **within seven days** of becoming aware that their worker has suffered an injury and is NOT likely to be away from their normal duties (or hours) for more than seven days continuously.
- when requested by a worker, provide their (business) name and address for the service of documents; and they should provide the name of their workers compensation insurer
- participate and co-operate in the establishment of an **Injury Management Plan** by their workers compensation insurer for the injured worker

(An Injury Management Plan is a plan for co-ordinating and managing those aspects of injury management that concern the treatment, rehabilitation and retraining of an injured worker, for the purpose of achieving a timely safe and durable return to work.)

- if reasonably practicable, **provide suitable employment** (as defined in Section 43A of the Workers Compensation Act 1987) to the injured worker. The only exceptions to this obligation are: (1) the worker voluntarily left their employment after the injury happened; (2) the employer terminated the worker's employment after the injury happened, other than for the reason that the worker was not fit for employment
- notify their workers compensation insurer immediately if they do not provide suitable employment in response to a request by the injured worker for suitable employment.
- send an injured worker's claim form and any other documents provided by the worker that relate to the claim, to their workers compensation insurer **within seven days**.

Re-training should be offered where possible if injured workers are unable to return to their former duties. This should be discussed with the insurer who may be able to provide financial incentives.

Employers should notify their insurer immediately if they are unable to provide suitable duties to partially unfit workers who request it. If this is the case, then the worker should contact the insurer and tell them the employer cannot offer suitable work. In some circumstances, an additional weekly benefit may be paid to the worker whilst that worker actively seeks work or undergoes approved rehabilitation training.

Because of the possible absence of "suitable duties" in the shed and the resultant effect on income of the shearer unable to shear, fitness before starting work and reduction of all the hazards described here to prevent injury or harm is vital.

An employer should not

- dismiss an injured worker because of the injury within six months of the worker becoming unfit for employment. It may be longer depending on arrangements in the relevant Award or Enterprise agreement.

An employer must

- pay any compensation money received from the insurer, as soon as practicable, to the worker entitled to the compensation.
- not take or receive (directly or indirectly) any money from a worker, by way of deduction from their wages or otherwise, in respect of any liability under the workers compensation legislation.

3.3.2 Constant obligations of being an employer

An employer must

- **keep a correct record of wages** paid to employees, and the trade, occupation or calling of each worker for a period of at least seven (7) years from the date of the last entry in that record.
- **keep a workers compensation policy** for a period of a least seven (7) years from its expiry, or until all employees that the policy was in force for have left, whichever is the later.
- have a **Register of Injuries** book at **each** of their workplaces. It should be **readily accessible** to any worker (or any person acting on their behalf) who wishes to record details of their injury
- have a summary of the workers compensation legislation displayed in a conspicuous place at the workplace.
- **establish a return to work program** that is to be displayed or made available to workers at the workplace and outlines the general procedures that will apply when a person is injured at work, and the steps that will be taken to provide rehabilitation and suitable duties. The Program should be developed in accordance with Guidelines available from WorkCover. A large employer (i.e. with a basic tariff premium over $50,000 per year) must display the return to work program at each workplace.

A **small employer** (i.e. with a basic tariff premium of $50,000.00 per year or less)

- can choose to adopt a relevant standard return to work program prepared by WorkCover as their established return to work program. This is available from the insurer or through the WorkCover Publications Hotline 1800 658 134.
- must display the return to work program at each workplace where employees work, or
- provide a copy of the return to work program to any worker who requests it or who makes a claim for workers compensation benefits, or
- makes satisfactory arrangements to ensure that all employees have access to a copy of the program.

4. IDENTIFICATION, ASSESSMENT AND CONTROL

Workers and others involved in shearing and crutching operations should be kept free from risks to their health and safety. The preceding Chapters have described how, before shearing starts, employers should identify any hazards that may arise because of the work activities, assess the risks that these hazards might bring about, and as much as possible control these risks.

Specifically, safety in shearing operations can be affected by many factors. Hazards can arise from:

- work premises
- work practices
- plant
- hazardous substances
- manual handling (including the potential for occupational overuse injuries)
- layout and condition of a place of work (including lighting conditions and workstation design)
- biological organisms, products or substances
- the physical working environment (including the potential for the following)
  - electrocution
  - fire or explosion
  - people slipping, tripping or falling
  - contact with moving or stationary objects
  - exposure to noise, heat, cold, vibration, radiation or a contaminated atmosphere.
  - dangerous confined spaces
  - workplace violence

amongst others.

This means that all aspects of operations should be looked at very carefully: the people involved, the equipment being used, the environment, how communication will take place, how emergencies will be managed and any other matters that may affect the safety of workers and others in the shed and yards.

The Chapters that follow show some of the areas where hazards might be identified, some areas where related risks might be assessed and some possible ways to control these risks. While it is not an exhaustive list, these recommendations indicate possible courses of action you should consider. However, you may choose alternative methods of achieving a safe system of work.

5.WORK PREMISES

The shearing shed and surrounds is an environment in which there is a high risk of injury and illness. The physical components of the shed, yards and equipment may be at fault or may require work practices that result in ergonomic problems. Hazards may arise from the relationships between the person, the job and the work environment. For example, the location of the shearers' work-station in respect to the catching pens, the let-go area and other workers.

Major modifications to the shearing shed are costly, but should be compared with the potential costs of not making the modifications. If major modifications to the shed are required to make it safe, options should be investigated to reduce or eliminate use of the particular shed.

5.1 Yards and races

Hazard identification

Yards and races expose the worker to risks of crushing, collisions, trips, slips and falls. These may result in contusions, muscular injuries or fractures. Additionally, where fences have sharp edges, protrusions and splinters, the worker is at increased risk of receiving cuts and embedded objects in the skin. See also Section 5.4

Areas for risk assessment:	Example control measures:
Design aspects	Design and construct yards to promote stock flow, which reduces labour required. Consult and incorporate design information from relevant sources, when modifications to the design of yards and races are considered. Consider environmental factors such as shelter and drainage when building new, or modifying old, yards.
Construction	Construct and maintain races and yards so as not to cause injuries to workers (or stock)
Level of repairs and maintenance	Ensure that fences and gates are well maintained and in good working order. Repair protrusions, broken wires and sharp edges before each use.
Working procedures	Train and supervise workers in the work practices they are undertaking.

Whenever building or designing sheep yards, it is recommended that, as well as using information available (Appendix 1 - further information), the designer/builder should seek the views of experienced yard workers.

5.2 Worker access to the shed and work-station

Hazard identification

Look at how the worker gets access to the shed, particular if it is a "raised" shed. Once in the shed, look at aspects of layout and design for potential for harm as workers move from and to their *work-stations*, particularly, shearers moving to and on, the *board*.

Areas for risk assessment:	Example control measures:
Steps	Install properly designed stairs (Table 3) when required by the design of the shed. Ensure steps are in sound condition, having wide treads (Table 3) and a slip-resistant surface. Install appropriate handrails where there a risk of injury through slips, trips and falls.
Construction and maintenance of doors and ramps	Construct and maintain entrance and exit ways to and from the shed properly. Particularly, sliding doors should be unable to slip from their rails.
Layout in the shed	Arrange layout so that workers moving in and out of the shed are able to do so without having to negotiate their way around dangerous obstacles, *shearing plant* or a working shearer.
Access to the board	In the shed, ensure workers have good access to their work-stations.
Machine placement	Ensure equipment is adequately guarded, particularly shearing gear, wool presses and *grinders*. Place equipment, such as grinders strategically i.e. in locations that enable access from only one direction and are in a separate area to the work-stations for other shed workers. Place warning signs/stickers in hazardous areas if other controls do not eliminate risk.
Work practices	Ensure practices such as carrying loads up steps or lifting onto landings, if necessary, are done safely. See Section 6.

5.3 Sheep entrance/ramp

Hazard identification

Good design and construction is important for efficient sheep movement and to minimise labour requirements. If sheep can quickly and easily enter the shed, risks to the worker of that part of the process are reduced.

Areas for risk assessment:	Example control measures:
Sheep entry to the shed	Construct a wide opening into the shed so several sheep can move in side by side. Make sure the entrance ramp is not too steep for people or sheep to move safely. Construct the ramp floor solidly and screen sides and floor so that the sheep cannot see out or down through the ramp. In higher rainfall areas where a slippery surface can be a problem, replace the ramp with steps or improve it by fixing battens onto the ramp floor, perpendicular to the flow of sheep.
Access for workers and dogs moving the sheep into the shed.	If a walkway along the side of the ramp is present, ensure it is safe to use.

5.4 Pen gates

Hazard identification

The ease with which sheep can be moved around the pen area of a shearing shed can also be influenced by the position and type of gate installed. Gates that are easy to operate and wide enough to let sheep move through as a group will assist with sheep movement. Examination of gates should also include those in outside yards as well as those inside or under the shed.

The appropriate gate to install will depend on the internal design of the shed and the gate's location. Conventional swing gates in the main are unsatisfactory because of the difficulty of opening them into a pen full of sheep. A number of gate types have been developed to overcome this problem.

Gates expose the pen worker to crushing, collisions, slips and falls. These may result in contusions, muscular injuries or fractures. Additionally, where there are sharp edges, protrusions and splinters; the worker is at increased risk of receiving cuts and embedded objects in the skin.

Areas for risk assessment:	Example control measures:
Gate design	Use a gate design that promotes stock flow. Consider installing lift or slide swing gates to make the work easier and safer. Consult and incorporate design information from relevant sources, when considering modifications.
Level of repairs and maintenance	Ensure that gate hinges, catches, railings and stops are well maintained and in good working order. Pen gates should be able to move freely in the desired direction(s), and stay shut when latched against the pressure of sheep. Repair protrusions and sharp edges on gates before each major use.
Working Procedures	Ensure pen workers are adequately safety trained in the work practices they are undertaking.

5.5 Holding and filling pens

Hazard identification

Sheep holding areas should be examined as for yards and races (Section 5.1) Examination of pens should include those inside or under the shed.

Nearby machinery storage, hay sheds or *skillions* added to the side of the shed may also be used as extra sheep-holding areas, so should also be included in the hazard identification process.

In particular, look at size of pens, as this is vital to maximising sheep throughput while minimising work involved in filling. Well-planned *filling* pens are much better to work in. The general requirements of Section 5.1 also apply inside the shed.

Areas for risk assessment:	Example control measures:
Construction & maintenance	Ensure that gates and railings are well maintained and in good working order. Pen gates should be able to move freely in the desired direction(s), and stay shut when latched against the pressure of sheep.
Size of pens	Undercover holding space should be sufficient for at least 1 day's shearing without including the *catching pens*. This may be extended to 2 days in the high-rainfall areas or where shearing is undertaken during wetter months. Keeping sheep dry not only makes for easier shearing but also reduces risks from zoonoses (Section 10.4) and other hazards.

Make holding pen capacities throughout the shed multiples of catching pens. This maximise the throughput of sheep while minimising the number of "fills" needed.

Filling pens should hold the same or double the number held in each catching pen.

5.6 Catching pens

Hazard identification

Generally, the shearer enters the *catching pen* through the doors (Section 5.7) then catches and drags the sheep back through the doors to the board for shearing/ crutching.

The two main considerations for hazard identification are; ease of *penning up* sheep and ease of catching for the shearer. If either of these is difficult, risk of injury and fatigue (Section 6.3) increases.

The general requirements of Section 5.1 (construction and repairs) also apply here. Battens that run across the catching pen allow sheep to gain a foothold, restricting the ease of tipping and dragging and increasing the risk of back injury to workers.

Damaged or loose battens can result in sprains, fractures, and wounds from exposed nails or splinters. Consideration should be given to the effect of natural light from below (in raised sheds), baulking sheep.

Look for protrusions in the pen and flooring, particularly on or near the door, which could result in punctures, cuts and bruising.

Obstructions or steps between the board and catching pen increase the risk of trips and falls at all times, and back injury when dragging sheep to the down-tube.

Similarly, if the floor is wet and dirty, injuries from slips, trips and falls will be more common. Sheep manure beneath the grating can cause slipping or risks to health through contact with the manure.

Areas for risk assessment:	**Example control measures:**
Pen Size	If practicable, make the catching pen dimensions to provide the best trade-off between the minimum number of pen-ups per *run* and minimum distance to drag the sheep (Table 3). Penning up is easier if each pen holds a minimum of half a run (about 20 sheep) Reduces catching pen size if it necessitates excessive lifting/ dragging of sheep. Make pen larger if it restricts manoeuvrability and requires frequent refilling. When designing a shed, remember that the capacity (size) of the catching pens will determine the distance between stands.
Design of floor battens	Install timber battens that run in the direction of the drag and avoid using steel mesh. Space battens to prevent sheep's hooves being caught between them. Block the light from underneath, if light hinders sheep flow. Make a gradual floor slope in the catching pen toward the down-tube to assist with the ease of drag (Table 3).
Maintenance	Repair any protrusions inside of pens and gates before working through the pen. In ground level sheds, mount the battens on removable frames to make cleaning under them easier.
Obstructions or steps between the board and catching pen	Remove any obstructions between pen gates and down-tube.
Hygiene	Keep floors as clean and dry as possible. Do not leave sheep in the catching pens overnight and schedule a regular cleaning regime.

5.7 Catching pen doors

Hazard identification

The size, weight and action of the catching pen doors have injury implications. Low doors can strike the shearer in the lower back region when pushed backward by a sheep. Heavy doors can also induce back pain and strain when they strike the shearer as he/she drags the sheep from the pen. Gates that have a high level of resistance also contribute to increase fatigue and back strain while pushing them open.

Work practices such as latching gates open can allow sheep to escape from the catching pen onto the board, resulting in collisions, falls from raised boards and loss of handpiece control.

Areas for risk assessment:	Example control measures:
Design and condition	Ensure the catching pen gates swing easily both ways to allow uninterrupted access for the shearer. Double (bat-wing) gates are most suitable for across the board sheds and provide easy access for the shearer, minimal obstruction to the picker-ups on the board and offer equal accessibility to left-handed shearers. Single gates may be more appropriate for some side catch and let-go designs. Minimise resistance and inertia of the pen gates. Provide broad padding on the inside of gates at the height of the lower back. Make doors from lightweight material, smooth on both sides and with no protrusions. Ensure pen doors are high enough to strike the shearer in the shoulder rather than the lower back.
Work practices	Do not latch doors open while sheep are in the pen.

5.8 Catching pen location

Hazard identification

Unnecessary strain on the shearer's back will result from poorly located and orientated catching pens and doors. If a shearer is required to turn and twist each sheep through more than 90° as he/she drags it from the pen, the risk of injury, short and long-term, increases. The shearer, having caught the sheep in the catching pen, should be able to walk backwards, carrying or dragging the sheep from the catching pen gateway (call it, say, position 12 o'clock) to the shearing starting position. This should be beside the down tube facing 3 o'clock or 9 o'clock depending on whether the shearer is right or left handed and whether the board design is across the board or open board. This should be regarded as the maximum angle.

Areas for risk assessment:	Example control measures:
Location of the pen in relation to the shearer, particularly where the catching pen door is located relative to the down tube.	Orientate pen gates and down-tubes to enable shearers to walk backward to the shearing position without needing to or turn more than 90°. The ideal design is where the shearer walks backward to the shearing position through the smallest possible angle.
Space	The shearer should be able to work without encroaching on the next shearer's work-space or route in and out of the catching pen. Sufficient work-space is required between the end *stand* and the wall. When constructing a new shed, provide a separate catching pen for each shearer.
Facilities arranged for left-handed shearers	Make a stand available that may be modified for use by a left-handed shearer.

5.9 Shearing board

Hazard identification

Inspect the *board* before each shearing, for loose and/or rotten flooring that needs repair. The shearing board floor should be soft, even and smooth.

Look at the *back harness* mountings for security of mounting and freedom of movement.

Check that there is provision for one or two stands in each shed to cater for left handed shearers. Left-handed shearers should be able to face the rest of the shearers rather than the wall.

Consider if installing a "raised board" is an option, particularly if building a new shed. They minimise interference between shearers and shed workers and allow the *shed hands* to pick up fleeces without bending, saving time and reducing fatigue.

If a raised board does exist, consider risk of falls from it.

Consider "centre board" designs where the sheep come from a pen behind the shearing stand and are let out beside the catching pen, as they reduce congestion on the board and the consequent chance of injury.

Examine whether sufficient floor space is available for all workers to perform their tasks safely and effectively.

Assess tool storage and other shearer welfare hazards (Section 11).

Areas for risk assessment:	Example control measures:
Construction	Repair all boards before each shearing. Replace boards that are very worn. Counter-sink any protruding nails and reduce movement in any floorboards
Design	Modify the board if shearing larger bloodlines or rams render the board too narrow for safe operation. Ensure sufficient floor space for all workers to perform their tasks safely including adequate distance between down-tubes and the edge of the board. Clearly identify the edge of the board visually with paint or tape or installing a guard-rail to reduce likelihood of falls from the board. If modifying or building a shed install a "centre board" design if practicable. If building a new shed install a "raised board".
Tool Storage	Provide a storage shelf for each shearer adjacent to every down-tube, with a raised edge and enough space to hold an oilcan, comb brush, screwdriver and other accessories.
Back Harness	Provide strong, secure fixing points, which are free to swivel and adequately fixed. They should be clear of the overhead shaft, fans, electrical cables and devices and within convenient reach. If it is not possible for design reasons to provide such a point, the employer in consultation with the shearers should investigate alternate means of reducing the chance of back injury. The shearer should ensure that the harness itself is of suitable design and maintained to work as intended.

5.9.1 Let-go Area

Hazard identification

Sheep are "let go" after shearing through a chute or other opening. Obstructions to the smooth exit of sheep place significant strain on the shearer and increase the likelihood of back injury.

Additionally, the placement of let-go doors or chutes in areas that funnel prevailing cold winds can increase muscle fatigue.

Glare filtering through the let-go area, also increases the chance of cuts to shearers and sheep.

Areas for risk assessment:	Example control measures:
Ease of sheep exit	If building or redesigning the let-go area, let-go chutes/doorways should be located directly in front of the sheep at the completion of shearing. Ensure barriers such as wooden strips at the opening of let-go chutes/doorways are removed. Ensure that chutes/doorways are large enough to allow for easy ejection of large framed sheep. Where chutes are used, they should be extended onto the floor of the shearing board with the front edge lower than the floor for easy release of sheep,
Placement of let-go doors or chutes	If building or redesigning, consider door placement to avoid cold winds onto the shearer.
Glare	Reduce glare through the let-go area as it will baulk sheep and increase the risk of cuts.
Working Procedures	Keep dogs and other distractions away from let-go areas to reduce baulking of sheep.

5.10 Wool room

Hazard identification

The likelihood of injury due to collision with fellow workers and contact with shed machinery can be influenced by the amount of space available. Sufficient space in the *wool room* is required to safely and properly process (throw, skirt, roll, class, press and store) the wool.

Working on small wool tables, which are not designed for the size of current fleeces, or are badly designed and maintained, can result in back strain and other injuries.

Uneven floor surfaces increase the chance of trips, slips and falls, while sharp edges and protrusions used to support wool *packs*, on *wool bins* or elsewhere, pose a risk of cuts and puncture wounds.

Areas for risk assessment:	Example control measures:
Space	Ensure wool tables have adequate room for wool rollers to manoeuvre around table without contact with machinery or other workers. Keep the area immediately around the wool press clear to allow safe operation Keep the routes between wool bins and press short and clear of obstructions.
Flooring	Make the floor smooth and even to reduce risk of ankle injury and lower limb strain. Repair all worn and/or loose flooring before each shearing. Provide impact-absorbing material such as rubber matting if a concrete floor is used. Keep any such material free of wool by sweeping and ensure it is washable or otherwise cleanable.
Wool table	Ensure wool tables are large enough to accommodate the fleeces being shorn. Ensure that the height of the wool table is appropriate for workers. Locate tables as close as possible to the shearers to reduce effort by the shed hands. Slope the wool table forward toward the shearing board to facilitate ease and accuracy of throwing,
Worker numbers	Ensure the number of shed hands is appropriate to the workload and the space available for them to work.
Wool trolleys	If required by the work practices, provide a proper "wool barrow" rather than a "bag trolley". If a *bale* trolley is used ensure the floor is level and of sufficient strength to support the wheels of the trolley.
Wool bins and packs	If wool packs are suspended in the wool room or on the shearing board, make their fixing points safe. Locate wool bins for ease of access for the wool rollers and classer. Remove any sharp edges, protrusions or splinters in or on the wool bins. Use portable bins rather than fixed for optimal placement.

5.11 Loading areas

Hazard identification

Look at loading practices, particularly manual handling. Inspect equipment and structures and examine work practices. The use of hoists and vehicles such as fork-lifts or other loaders, has associated considerations covered in the OHS Regulation 2001 Chapter 5.

Areas for risk assessment:	Example control measures:
Manual handling issues	Ensure correct manual handling procedures are followed when moving bales. (See Section 6.1.)
Barriers	Protect raised loading area platforms with an approved safety barrier, removed only during loading operations. The safety barrier should be in place when doors are open and loading or unloading is not in progress.
Construction and maintenance	Ensure all loading equipment and facilities are constructed and maintained in a safe condition.
Electricity risks	Place all electrical cables safely away from contact with moving machinery, workers or bales.
Load shifting devices/vehicles	Ensure that any operator has received adequate information and training and is supervised to the extent necessary to minimise the risks to health and safety. Ensure that devices and vehicles are used only for the purpose for which they were designed as recommended by the manufacturer. Use safety features or warning devices eg reversing buzzers as intended. Observe licensing/certification requirements eg for forklifts.

5.12 Dimensions

The Risk Management approach imposes obligations on an employer to eliminate identified risks or, if not reasonably practicable to do so, to control them.

The example control measures described in this document indicate possible courses of action you should consider. However, you may choose to use alternative methods of controlling the risks and achieving a safe system of work. Accordingly, dimensions different to those recommended here may be used if their use poses a lesser risk to health and safety.

Table 3 - Distances

Scope	Suggested (mm)
Maximum distance from the centre of the catching pen gate to shearing position in front of the down tube, (when hanging perpendicular).	3050
Minimum distance between stands (posts)	1975
Minimum distance between stands and any other object (not wall)	2000
Power switch for individual electric plants - height above floor	1000-1500
Centre of plank from floor	2135
Overall height from floor (shearing plant)	2210
Gear should be positioned so that the down-tube is to the left of the chute (for right hand shearer)	152-178
Raised board - width at the stands.	1830
Height of partition between catching pen and the board.	1500 (min)
Raised board - height above the wool room floor	750-850
Let go chutes should have their entrance extended onto the floor of the board by	100-150
Let go chutes should have its front edge lower than the floor by	100
Minimum clear space around the working sides of the wool table	1000
Minimum distance between any machine and the wool table	2000
Catching pen dimensions providing the best trade-off between the minimum number of pen-ups per run and minimum distance to drag	2500 x 2500
Floor slope in the catching pen toward the down-tube	1 in 10
Minimum width of stairs*	1000

The down-tube height should be so positioned that the lower end of the short tube describes a 275 mm (diameter) circle on the floor, with the long tube perpendicular and 600 mm away from the wall or any obstruction.

The posts that support the main plank, to which the overhead gear/shearing plant is attached, should be placed midway between the stands.

5.13 Lighting

Hazard identification

Lighting standards vary markedly between and within sheds. At a single location in the shearing shed, lighting quality can change with time of day and weather conditions. Different work areas in the shed have different lighting characteristics and requirements - whilst there are minimum levels recommended in AS/NZS 1680.2, more or less light may be required depending on the circumstances. In instances, where glare or low light levels are a problem, the chance of cuts to the shearer is increased. In addition, excessive glare or poor lighting levels may place extra strain on the eyesight of shed workers. This can result in headaches, fatigue and decreased work capacity.

*AS 1657-1992, "Fixed platforms, walkways, stairways and ladders - Design, construction and installation" provides guidance on these particular aspects

An employer must ensure that lighting is provided that:

- **is adequate to allow employees to work safely**
- **does not create excessive glare or reflection**
- **is adequate to allow people including non-employees to move safely within the place of work**
- **facilitates safe access to and *egress* from the place of work, including emergency exits.**

Light levels can be measured objectively with a light meter but this is unlikely in a shearing shed. In practice, lighting should be judged as adequate for the tasks required and should be adjustable to suit the time of day, time of the year and weather conditions.

There are a number of factors that make lighting "adequate" for any given task. Look for these characteristics:[3]

- optimal luminance (brightness)
- uniformity
- avoidance of "direct" light to reduce glare and heat
- appropriate contrast
- correct colour
- avoidance of flicker.

Wool classers and wool rollers need indirect but plentiful light. The grinder in particular also needs to be well lit to allow safe and efficient operation and reduce the risk of injury.

Areas for risk assessment:	Example control measures:
Work areas	Ensure all lights are of appropriate wattage, in good order and cleaned, before use of the shed. Install measures such as blinds to control glare from skylights and windows. Paint the walls around the work areas with a white or light blue paint to increase reflected light.
Wool Room	Provide wool classers and rollers with sufficient indirect light to work safely. Note that the light over the classer should not be coloured eg by translucent roof sheeting. This makes the actually work of classing harder. If fluorescent lights are used, fit tubes with appropriate colour correction eg "Daylight" style tubes.
Grinding Area	Illuminate work to allow safe and efficient operation and reduce the risk of injury.

[3] Further information: AS/NZS 1680.1:1997 Interior lighting - Industrial tasks and processes

6. MANUAL HANDLING, FITNESS AND FATIGUE

6.1 Manual handling[4]

Hazard identification

Manual handling is any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any animate or inanimate object. These activities can lead to both acute injury brought on by a sudden movement, like sprains and strains or, chronic illness with cumulative effects like occupational overuse syndrome and back problems.

The back, shoulders, wrist, neck and knee are the bodily locations most often affected by manual handling injuries/diseases. Most of the injuries involved sprains and strains. Approximately 65% of sprains and strains involved the back[5].

Virtually all jobs in the sheep industry involve some form of manual handling, and employers should firstly identify all jobs where manual handling activities are carried out. Secondly, carry out the risk assessment process described in Section 2.1.2 and the National Occupational Health and Safety Commission's Code of Practice for Manual Handling, then finally eliminate or control the identified manual handling risks.

Specific requirements regarding manual handling are set out in the OHS Regulation 2001 Part 4.4. An employer must ensure that:

- **all objects are, where appropriate and as far as reasonably practicable, designed, constructed and maintained so as to eliminate risks arising from the manual handling of the objects**
- **work practices used in a place of work are designed so as to eliminate risks arising from manual handling**
- **the working environment is designed to be, as far as reasonably practicable and to the extent that it is within the employer's control, consistent with the safe handling of objects.**

Areas for risk assessment:	Example control measures:
Work organization Work environment	Redesign the manual-handling task to eliminate or control the risk factors.
Training	Ensure that employees involved in manual handling receive appropriate training in safe manual handling techniques, correct use of mechanical aids and team lifting procedures appropriate to the activity.
Actions and movements (including repetitive actions and movements) Duration and frequency of manual handling Weights and forces	If it is not reasonably practicable to eliminate a risk arising from manual handling, an employer should design the work activity involving manual handling to control the risk and, if necessary, must: • modify the design of the objects to be handled or the work environment (to the extent that it is under the employer's control), taking into account work design and work practices • provide mechanical aids, such as bale trolleys, back harnesses and other supportive apparatus or, arrange for team lifting, or a combination.
Working posture and position	Use back harnesses and other supportive apparatus. Have secure mounting points in appropriate positions relative to the down-tube for back harnesses Warm up/down - Simple stretches of the relevant muscles are adequate, particularly the hands, back and arms. These exercises will assist in limiting the extent of manual handling injury. It is important to note that doing the right thing early will reduce the chances of problems later.
Location of loads and distances moved Characteristics of loads and equipment	Section 5.6 Catching Pens Section 5.9 Shearing Board Section 5.10 Wool Room Consider adopting new mechanised shearing processes, which virtually eliminate lifting and dragging of stock.
Workplace and workstation layout	Orientate pen gates and down-tubes to enable shearers to walk backwards to the shearing position, limiting the requirement to turn the animal through angles greater than 90 degrees. Have at least one work-station that can be modified to suit a left-handed shearer.
Skills and experience	Allow employees, newly engaged on a manual handling task or process or returning from an extended absence, a period of adjustment to build up the skill and ability demanded by the tasks they are required to perform.

It is likely that for many jobs the application of these types of control will not be mutually exclusive. In some job(s), it may be workable to redesign some parts, and to provide mechanical aids for other aspects.

[4] Further information can be found in the National Code of Practice for Manual Handling [NOHSC: 2005 (1990)]
[5] Workers Compensation Statistics New South Wales 1995/96 WorkCover NSW 1997

6.2 Fitness for work

Hazard identification

The demands of shearing and shed work require that workers have a reasonable level of physical preparedness. As for all matters, the primary legal responsibility to ensure the health and safety of the workers falls on the employer/contractor. It may be difficult in the shed to quantitatively assess a worker's level of fitness but employers can check level of experience and training to help determine if an individual is physically capable of carrying out their work without risking health or safety.

There is also a general obligation on employees to take care of others and cooperate with employers in matters of health and safety. An employee must also co-operate with the employer or other person so far as is necessary to enable compliance with the OHS Act 2000 and OHS Regulation 2001 (Section 20, OHS Act 2000).

Other than potential for injuries resulting from improper clothing, fitness related risks might be difficult to assess, as symptoms of injury or ill health may not occur immediately. Both the employer and the employee should be aware of the hazards described here and take all steps to eliminate or minimise the risks.

Areas for risk assessment:	**Example control measures:**
Fitness and experience level	Assign work appropriate to the fitness and experience level of the worker. Shearers and other workers should retain fitness as necessary when not working in the shed. Employer should encourage part time shearers or those re-entering after a period away from the activity, to exercise care and only undertake a suitable amount of work until fit. This may be by way of the employer determining competency to perform various aspects of the job.
Shearers & shed hands	Maintain good flexibility and strength Protect back from cold drafts Sleep on firm quality beds Adopt sensible resting position between runs. Warm up/ down - Simple stretches of the relevant muscles are adequate, particularly the hands back and arms. These exercises will assist in limiting the extent of manual handling injury. It is important to note that doing the right thing early in a shearer's career will reduce the chances of problems later.
Shearing efficiency	Plan the day's work including rest periods to make the day less strenuous. Improve physical fitness by maintaining reasonable standards of stamina, strength and flexibility. Maintain good eating habits - high quality and quantity to provide necessary energy. Plan fluid intake, particularly when hot. (See Section 11.3.1)
Clothing	Wear clothing appropriate for the work including suitable footwear that covers the whole foot, not bare feet or thongs. Shearers sometimes choose to wear "moccasins" or other soft shoes on the board but footwear that is more solid is recommended elsewhere in the shed and particularly the yards. Consider sun protection for yard workers.
Smoking[6] 	Develop a written non-smoking policy in consultation with employees. Designate the indoor areas as non-smoking. Inform workers through meetings and signs using the standard symbol.
Drugs and Alcohol	Do not permit working under the influence of alcohol or drugs. Ban illegal drugs such as stimulants. Be aware that even prescription drugs may have side effects decreasing work safety.

6.3 Fatigue

Hazard identification

Physical and mental fatigue can give rise to risks to worker health and safety. Muscle fatigue, for example, makes it harder to do physical tasks (like shearing) safely. Such things as repeated physical effort and strain can bring it on, as can long work periods without proper breaks, and other factors.

Mental fatigue, on the other hand, can make it harder for workers to stay alert and concentrate on mental tasks like identifying hazards or following safe work procedures. It can be brought on by many factors, including lack of sleep and working a long time on the one task.

Fatigue may be difficult for an employer to recognise in workers. Frequent stoppages to rest, poor quality work, simple mistakes, irritability, decreased alertness, increased information-processing and decision-making time, slower reaction time, and decreased motivation may all be symptoms.

Many factors contribute to fatigue, and workers are often not aware of how fatigued they have become. Stresses that add to fatigue include:

[6] Further Information - Workcover NSW Health and Safety Guide Passive Smoking Policy & Control

- many hours of continuous work, requiring a high alertness level
- inadequate or poor quality sleep
- boredom or monotony
- pressure to meet deadlines,
- restricted movement or seating discomfort.
- heat, noise, vibration and poor air quality/air contaminants
- heavy physical work.
- illness such as colds or 'flu.

Fatigue, like other sources of risk, should be effectively managed to avoid exposing workers to potential harm.

Areas for risk assessment:	**Example control measures:**
Equipment	Employers should adopt plant and equipment that reduces physical strain and effort.
Work practices	Employers should promote work practices that reduce physical strain and effort, and should ensure that workers take adequate rest breaks. Care should be taken in determining workloads so workers are not exposed to risks through working excessively long daily or weekly schedules.
Travel or accommodation factors	If providing travel or accommodation, ensure workers have the best possible opportunities to rest and combat fatigue.

7.WORK PRACTICES

Hazard identification

The employer must take reasonable care to identify hazards arising from work practices, work systems and shift working arrangements (including hazardous processes, psychological hazards and fatigue related hazards).

All persons involved in working in and around the woolshed should participate in the identification of hazards, particularly before changes to work practices and systems of work are introduced.

The development of new shearing and sheep handling technologies require ongoing monitoring. In evaluating the adoptions of new technologies, work practice hazards should be assessed based on the same criteria and processes as for the current technology.

7.1 Shearing, crutching and associated animal handling

Hazard identification

Most common injuries associated with shearing and crutching are manual handling related e.g. back injuries from sheep handling and chronic muscular/skeletal conditions of the hands and arms, sometimes caused by the shearing gear. Hazards from contact with shears, sheep and other objects should be identified. Falls from raised boards (if present) should be considered.

Areas for risk assessment:	**Example control measures:**
Manual handling	See Section 6.
Cuts	Utilise more effective and safer handpieces, as they become available. Note Sections on shearing plant (8.1) and handpieces (8.2).
Working Procedures	Ensure adequate space is available for the shearer and picker up to work safely. Install a raised board if practicable, to limit the likelihood of contact with handpieces by other workers. Remove all trip hazards on or around the board. The owner and contractor/ shearing team members should consult before shearing mobs of rams to determine a suitable method for shearing that allows adequate support to be available to shearers in case of a ram becoming free on the board. The support person's duties

can then include assisting with re-catching stock and/or disengaging machines in case of an emergency.

7.2 Picking up

Hazard identification

The shorn fleece drops as a bundle on the floor while the shearer catches the next sheep. In this period, the "picker-up" will grab the whole fleece, in a manner allowing it to be readily thrown onto the wool table and move off the board before the shearer returns to his/her stand. They may also sweep the board of any loose wool "dags" or faeces. Potential causes of injury to picker-ups involve collisions, lifting and twisting (Section 6).

Areas for risk assessment:	Example control measures:
Work Areas	Install a raised shearing board to reduce the level of back strain required to pick up fleece. Align wool tables toward the board to assist in the ease of "throw". Ensure there are no obstacles between board and wool table.
Working Procedures	Train and supervise workers in correct *picking up* techniques, particularly if not a raised board. Train workers in who has "right of way" in the shed.

7.3 Wool skirting/rolling/classing

Hazard identification

The "picker up" transfers the wool to the wool table. Wool handlers, in a process known as *skirting*, remove inferior portions. The remaining wool is rolled into a bundle and an assessment made of its grade or type by a classer. It is then temporarily stored in a wool-bin with other fleeces of similar type until it is pressed.

The layout, design and maintenance of the wool room and table are discussed in Section 5.10. The general considerations of Section 6 (Manual Handling) are also relevant here.

Areas for risk assessment:	Example control measures:
Working Procedures	Train workers to perform their tasks to minimise risk of manual handling injury. Organise work in the shed to avoid collision of workers. Train workers in who has "right of way".

7.4 Mobile crutching

Hazard identification

Mobile crutching deserves special mention because it has both some of the same hazards as "in shed" shearing and additional risks caused by being located outside, often a considerable distance from help or other facilities.

Particular note should be taken of risks caused by exposure to the elements and of the environment surrounding the work place. This area should be clear, flat and without risk to health, for example are there adequate toilet facilities, drinking water and shade for workers?

Look for manual handling risks from specialised plant such as crutching cradles and sheep handlers[7]. (Section 6.1)

One aspect of that should not be overlooked is the necessity for effective communication systems. This is especially important in paddock crutching or cleaning up flystrike or other situations where workers operate in physical isolation or where contact with other workers may be difficult.

Areas for risk assessment:	Example control measures:
Amenities	See Section 13
Equipment	Provide and maintain appropriate equipment to ensure the health and safety of remote workers including PPE, first aid and that gear required for emergencies. Ensure that there is sufficient ventilation for the exhaust fumes produced by any generators used.
Manual handling	See Section 6.1
Communication	Consider: • notifying the base (home, shed) that work is commencing • regular check-ins during the day to say that all is okay • notifying the base that the worker(s) have arrived and are leaving the site • use of hand-held radio/telephone communication systems.

[7] Further information is available in "Ergonomics of sheep handling equipment for shearing and crutching" VIOSH Unit of Ballarat 1999

7.5 Shearing goats and alpacas

Hazard identification

Existing sheep shearing sheds are generally used for goats and alpacas so the same hazards already discussed should be considered. In addition, the differing anatomy and behaviour of those species pose unique hazards.

Areas for risk assessment:	Example control measures:
Appropriate fencing	Make fencing for alpacas and goats appropriate (higher/specialised design/construction) to prevent stock coming in contact with workers.
Differences in Droving/Mustering	Goats and alpaca behave differently to sheep, especially in response to dogs, so take extra care when moving stock and working in yards.
Plant	Employers should ensure that employees are familiar with the safe use and maintenance of any specific equipment used such as electric or compressed air shears. Take care when shearing the non-greasy, fibres, that mechanical shears do not over-heat, causing burns to the shearers hands.
Working Procedures	Cashmere goats may be shorn upright with what is known as the Go-Down technique. This requires a different working procedure. Employers should ensure that shearers are trained in the procedure before commencing. Alpacas can spit or kick so employers should ensure that employees understand and take into account the characteristics of handling the animals so injury does not occur. Alpacas are shorn with the animal lying down so employers should ensure that employees are trained in and understand the procedure of restraining the animals so as not injure it or themselves.
Fitness	Stock-owners or other non-professional shearers who shear small flocks themselves should pay particular attention to Fitness and Training (Section 6.2).

8.PLANT

Hazard identification

The OHS Regulation 2001 Chapter 5 sets out many legal obligations regarding the design, manufacture, registration and use of plant. Refer to the Regulation to learn more about these legal requirements.

Some things you should know about plant

To make sure plant and equipment does not pose a risk when in use and when left unattended, special consideration should be given to the following;

- *All plant must be used for the purpose it was designed for, and within its specified capacity limits*
- *All safety features, guarding and warning devices must be used as intended, tested regularly, and not be made inoperative*
- *Plant must be maintained in safe condition. Inspection, repairs and testing must be carried out by a person whose combination of training, qualifications and experience has given them the skills for the job*
- *Employers should make sure that all plant is inspected and serviced regularly and that it is carefully checked daily before it is used. Log books and inspection check sheets should be kept*
- *All users of plant must be adequately trained to use the plant safely, and must be provided adequate supervision until they are competent to operate it safely without supervision*
- *Operators should not be permitted to use plant while they are under the influence of alcohol or any drug or other substance (including prescription or non-prescription medication) that might affect ability to operate their plant safely*
- *All available health and safety and emergency information about the plant and equipment must be provided to plant users, installers, testers and other persons who may be exposed to risk from plant and equipment.*

8.1 Overhead gear and shearing plant

Hazard identification

Essentially, they are a motor driving some form of shaft supplying power to a *handpiece*. Injury may be immediate, such as cuts from the handpiece or long term, e.g. arm/hand injury caused by hand-piece vibration.

Direct contact with *overhead* drive shafts or via clothing, towels, or fleeces, can result in significant injuries. Look at the height and guarding of the drive shaft in terms of risk of physical contact with raised arms or entanglement.

If the *down-tube* strikes or is struck by an object, eg. sheep, or has a malfunction, there is a high likelihood of partial or complete loss of control of the handpiece resulting in serious injuries.

Poorly maintained down-tubes vibrate causing upper limb injuries by creating an unbalanced load as well as vibrations in the dominant hand and upper limbs. Check down-tubes for mechanical condition. Look for the spring at the top of the down-tube to not be worn or weak. Spring tension and correct height of down-tube should be checked before shearing. Incorrect spring tension can cause wrist and arm strain.

Assess if the distance between down-tubes is adequate for shearing large framed sheep. That is, machine, shearer and sheep should have ample space to work without interference. (Table 3)

The on/off rope that hangs beside the down-tube is generally the sole means by which the shearer starts and stops the handpiece. If the on/off rope is not easily accessible, the likelihood of injury in an emergency (eg. a shearer losing control of a struggling sheep) and back strain due to the requirement for twisting to reach the rope, increases.

Look for exposed drive belts used to transfer power from the plant to the *overhead* gear and/or grinder.

Look for exposed cranking points and flywheels where internal combustion engines are used to drive the shearing machinery.

The OHS Regulation 2001 Clauses 90,136 and elsewhere set out many legal obligations regarding plant guarding. Refer to the Regulation to learn more about these legal requirements.

Areas for risk assessment:	**Example control measures:**
Emergency Stopping of Plant	Ensure the plant can be stopped quickly and safely in an emergency. Fit the power points for individual electric power plants around chest height to bring them within reach of the shearer in the working position. Ensure emergency stop controls are: • prominent, clearly and durably marked and immediately accessible to each operator of the plant e.g. not within range of a locked handpiece • handles, bars or push buttons that are coloured red • can not be affected by electrical or electronic circuit malfunction • suitably identified on the plant so that their nature and function is clear • located so as to be operated readily and conveniently by each person using the plant • located or guarded to prevent unintentional activation • able to be locked in the "off" position (or include an alternative method of power isolation) to enable disconnection of all motive power and forces.
Training and Induction	Ensure that employees know the purpose, location and operation of emergency controls and when to use them.
Guarding	Pay particular attention to all moving parts such as belts, pulleys and shafts. Prevent or reduce access to any danger point or area. If it is not possible to eliminate the risk of entanglement in plant with moving parts, persons should not operate, or pass in close proximity to, the plant unless the risk of entanglement is controlled by guarding that meets the requirements of clause 90 (1) of the OHS Reg 2001 or the use of a safe system of work.

Down-tubes	Ensure the spring at the top of the down-tube, and cogs, are in good condition. Reduce vibration by ensuring that the down-tube parts are in good condition and correctly installed. Maintenance of down-tubes is essential to safe and clean shearing. Guard all potential "nip points" including the elbow in the tube drive assembly e.g. by fitting "sleeves". Set up spring tension and height of down-tube correctly. Make the drive shaft high enough and/or ensure that adequate guards are in place, to minimise the risk of contact or entanglement. Discourage the use of overhead gear as a location to hang towels and shirts and provide other suitable alternatives for shearers.
On/Off Rope	Locate the rope so that the shearer in the starting and finishing shearing positions can reach it without stretching or twisting. The down-tube should not interfere or obstruct the shearer's access in either position. The rope should hang from the machine down to the long-tube elbow joint. The rope should be made of heavy cord strong enough to hang straight down and not be flicked out of reach by the slightest knock.
Exposed drive belts	Use guards to cover belts, flywheels and cranking points where risk of contact with workers occurs. Install barriers between such equipment and the grinder and workbench.

8.2 Handpiece

Hazard identification

In a shearing shed, the handpiece is usually driven by overhead gear via a down-tube. The handpiece drives and controls the *cutter's* motion across the *comb* and is pushed through the wool by the shearers hand and arm. The most severe handpiece injuries are cuts caused by uncontrolled handpieces, usually because of *lock-up*.

This is when the handpiece becomes jammed on burrs or other hard objects in the fleece, resulting in the full motor torque, plus driveline inertia, applying a very large torque impulse to the handpiece which is then often wrenched from the shearer's hand and flails around on the end of the down tube, while still operating.

The connections between the handpiece and the *short gut* are of generally of two types. The "pin" or "bayonet" type versus the "spiral-spline" or "worm drives" . The latter is recommended as they act as a safety device by the spline "unscrewing" itself when the handpiece locks, disconnecting the handpiece from the drive.

Cuts are also caused by contact with some of the exposed moving parts. Shearers use their free hand to stretch and "condition" the skin ahead of the handpiece, so if the sheep move unexpectedly, it is possible for the comb or other parts to hit the shearer.

If the handpiece is kicked from the shearer's hand and hits the floor or wall, it may dislodge the cutter, which can then fly across the board or jam into the comb and lock-up the handpiece.

Handpieces that are not functioning optimally will have an impact on the hand and arm workload of shearers.

This extra workload can result in added fatigue and injuries such as cuts, wrist and arm strain and burns from overheated handpieces.

Areas for risk assessment:	**Example control measures:**
Maintenance	Ensure all handpieces are adequately maintained and worn parts replaced.
Consultation	While almost all shearers now provide their own handpieces, employees should still consult with the employer if they have safety problems with their handpiece.
Nicks and cuts	Consider a handpiece design that covers the moving parts if practicable. Minimise the danger of a locked-up or dropped handpiece. (See Lock-ups) Ensuring shearers are trained in correct shearing techniques.
Lock-ups	See *Safety Clutches* (Section 8.2.1) Install "Spiral-spline" or "worm drives" between the handpiece and the short gut.
Design	Utilise technological advances as they become available; such as; lighter weight handpieces, electronic controllers that disengage the clutch after the handpiece is released and integral drive motors on handpieces, if practicable.

8.2.1 Safety Clutches

Hazard identification

The safety clutch is a spring-loaded drive-breaking (motion disengagement) mechanism located in the short gut. Handpieces become jammed on such things as burrs, ear tags, fencing wire, and wool jammed in the back joint cogs. If the driven parts of the handpiece

become jammed, the clutch, if in good repair and properly adjusted, will disengage. This will isolate the drive from the handpiece, so long as the handpiece is held firmly. Otherwise, serious injury can result from an "out of control" handpiece.

Not all machines are fitted with safety clutches or they may have been removed. Many clutches are worn out and tend to slip if they are not properly adjusted. Some shearers over-tighten safety clutches to deliberately avoid clutch slippage in dense wool. In instances where safety clutches are not fitted, removed or incorrectly adjusted, the likelihood of injuries to shearers is increased.

Areas for risk assessment:	**Example control measures:**
Fitting and adjustment	Fit properly adjusted safety clutches in good condition. Both the employer and employee should check the condition and adjustment of the safety clutch daily before the commencement of shearing. The tension setting of the safety clutch should provide a torque less than 2.9 Nm (a load setting of 26 inch/pounds). Have a tension wrench, which fits the safety clutch, available at every shearing shed during shearing. Discourage and avoid deliberate improper adjustment of clutches.
Wear in short gut *bayonet joints*	Replace the short gut bayonet joints with a "direct drive" (in some brands known as Johnno joints), i.e. a short-gut that screws directly into the drive cog.

8.3 Grinder

Hazard identification

The shearing grinder generally uses two large diameter steel disks covered with abrasive cloth rotating at high speed, with which the operator sharpens combs and cutters.

There are a number of major risks associated with the grinder:

- combs, cutters or sparks may strike the operator, particularly on the face
- the rotating discs may cut the operator
- rotating whole or part disks can fly off the grinder, colliding with workers
- sparks may ignite nearby flammable materials
- other shed workers making accidental contact with the grinder.

Areas for risk assessment:	**Example control measures:**
Mounting and location	Ensure grinders are adequately guarded securely mounted and illuminated. Locate the grinder in a non-traffic area of the shed. Ensure the direction of spin is away from work areas and flammable materials like wool packs. Check that discs are rotating in the correct direction, dependent on manufacturers' recommendations. Usually there is an arrow on the grinder bearing housing. Operators should check that discs are properly secured before each start-up by attempting to rotate discs in opposite directions simultaneously. Ensure discs, nuts and washers are compatible with the grinder, otherwise there is the chance of a rapidly rotating disc flying off. Do not locate or operate grinders in sleeping quarters.
Consultation	Make agreement before commencement of work as to the safest appropriate location for the grinder and who is to operate it. Shearers should not bring their own grinders unless prior approval is gained from the employer and the grinder is mechanically safe.
Training	Ensure the operator is properly skilled and trained - *"Expert"*.
Personal Protective Equipment	Make safety glasses and hearing protection available and ensure they are used. Glasses should meet Australian Standard 1337-1984. Hearing protection should meet AS/NZS 1269. PPE should be used and maintained so that it works as intended.