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1. Introduction

The University is responsible for carrying out Risk Assessments to ensure that: it meets its obligations under the Occupational Health and Safety Act in, so far as is practicable, to:

- Provide and maintain plant and systems of work that are safe and without risks to health
- Ensure the safety and absence of health risks associated with the use, handling, storage and transport of plant and substances
- Provide a workplace in a condition that is safe and without risks to health

The following regulations specifically require that assessments be carried out:

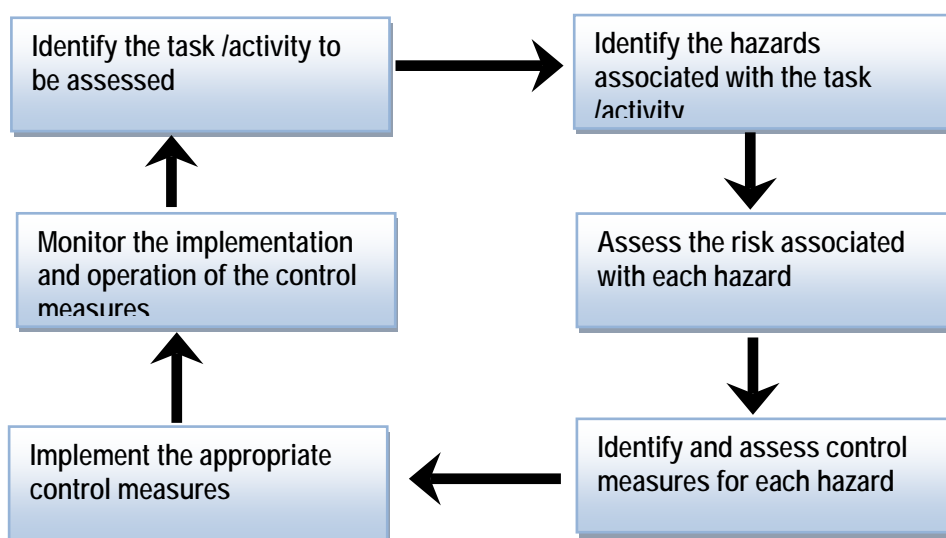
- Dangerous Goods (Storage and Handling) Regulations
- Health (Radiation Safety) Regulations
- Occupational Health and Safety (Asbestos) Regulations
- Occupational Health and Safety (Hazardous Substances) Regulations
- Occupational Health and Safety (Confined Spaces) Regulations
- Occupational Health and Safety (Manual Handling) Regulations
- Occupational Health and Safety (Noise) Regulations
- Occupational Health and Safety (Plant) Regulations
- Occupational Health and Safety (Prevention of Falls) Regulations

The primary objectives of the Risk Assessment are to:

- identify hazards associated with contract tasks and activities
- determine the level of risk
- establish appropriate risk control measures

These guidelines provide practical information to assist in the carrying out of Risk Assessments.

2. Risk Management Process



There are many ways to carry out a risk assessment. This document uses a general approach to risk assessment. Other more detailed approaches can be used such as Job Hazard Analysis, or Fault Tree Analysis. However in most cases these more detailed approaches are not warranted or practical.

2.1 Identification of Tasks

The work or process should be separated into significant tasks or activities. These tasks may be identified by the fundamental hazards associated with each task. Hazards may arise as a result of:

- the nature and type of services performed
- the location of the work
- materials, chemicals or equipment used
- the time of the work
- proximity to the public, students or University Contractors
- the work environment

2.2 Identification of hazards

The range of hazards associated with each task should be identified. A hazard can be defined as the potential to cause injury or illness to one or more people. When determining hazards associated with the task the hazard types below should be considered:

- Physical Hazards noise, plant related hazards, working at height, manual handling, ergonomic, traffic hazards, collapse, falling objects etc
- Chemical Hazards inhalation, skin contact with chemicals, ingestion of chemicals
- Electrical Hazards direct electrocution, contact with overhead or underground cables
- Biological Hazards infection, needle stick injury, handling of wastes
- Radiation Hazards radioactive materials, UV light, lasers
- Psychological workplace conditions leading to stress such harassment, strained relationships, excessive pressure, continuous deadlines

The Hazard Identification and Control Table (Appendix 1) lists a variety of hazards and the control measures which may be considered. This hazard list is not exhaustive and other controls may be considered for the hazards listed.

2.3 Assessment of Risk

The purpose of workplace hazard assessment is to determine priorities in hazard control. Effective hazard control involves a commitment of human, financial and physical resources. As these are limited, the University has to allocate them on its assessment of priorities. Any hazard assessment process should determine priorities based on the frequency and severity of injury or illness posed by the hazard or the risk associated with hazard.

The [University's Risk Criteria](#) should be consulted in the calculation of risk. The risk assessment matrix is used to prioritise hazards and provide a guide to how urgently they need to be tackled.

The assignment of risk rating may take into consideration:

- Past accident/incident reports
- Industry experience and data
- WorkCover claims data
- Personal experience and professional judgement

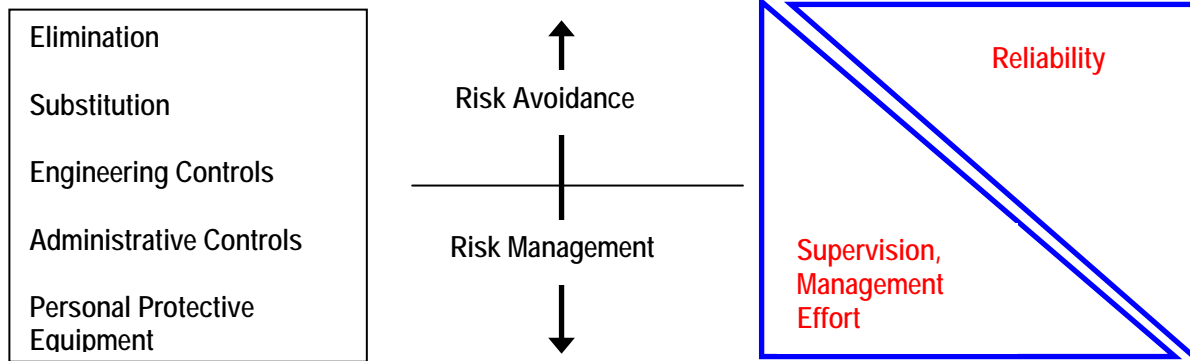
2.4 Control Measures

The Manager/Supervisor must ensure that suitable control measures for each hazard have been identified and an appropriate implementation process put in place.

Under Victorian legislation, the decision about appropriate control measures is left to the business concerned. Codes of Practice (Manual Handling, Plant etc.) will provide a guide to control strategies. However most of the legislation does require a certain approach in choosing control strategies. That approach is to give priority to eliminating or reducing the hazard: this is called the hierarchy of controls. Technically you must show in the hazard assessment that it is not practicable to implement a preferable control measure. For example you must show why it is practicable to choose hearing protection rather than noise reduction. In many cases this will be obvious, but if it is not, then a note should be made in the hazard assessment.

When determining risk control strategies, the hierarchy of controls summarised below should be used.

Eliminate the Hazard	Determine if the process, plant, equipment, testing methods, materials or substances are necessary	Off site fabrication, Purchase ready to use reagents
Substitute the Hazard	Reduce the risk by substituting a less hazardous process, plant, equipment, testing method, material or substance	Replace ladder with scissor lift, Substitute solvent based paint with water based paint Redesign plant to reduce noise levels Replace frequent telephone use with headsets
Engineering Controls	Install barriers, guards, containment, shielding, ventilation or alarms to reduce the exposure to the hazard	Reverse alarms/lights fitted to plant Exhaust ventilation to remove fumes Guards over moving parts Use mechanical aids to reduce manual handling
Administrative Controls	Introduce procedures, signs, permits to increase awareness of the hazard or limit exposure to the hazard. These processes are less effective because they rely on human attention and supervision	Job rotation, Work instructions Safety inspections Training
Personal Protective Equipment	Provide personal protection. This is the last resort because it is the least reliable and requires high levels of supervision, skills and attention	Hearing protective devices, Respirators, Hard hats



In summary the selection of suitable control measures should take into consideration:

- Level of risk
- Hierarchy of controls
- Practicability of implementation

3. Carrying out a Risk Assessment

3.1 Risk Management Program

A risk management program is cyclical, once current workplace hazards have been successfully controlled the process does not cease. A systematic monitoring and review system must be implemented as there is always the potential for new hazards to be introduced into a workplace. These hazards can be due to:

- use of new technology, equipment or substances
- implementation of new work practices or procedures
- a change in work environment (moving to a different office, staff reduction, etc), and/or
- the introduction of new staff with different skill/knowledge levels.

Effective forward planning is an integral part of monitoring and reviewing risk assessment processes. It is essential that all issues be addressed prior to the introduction of new equipment and work procedures. For example, planning would allow for the inclusion of OHS compliance into tender specifications for new equipment or services.

3.2 Risk Assessment Form

The risk assessment is completed on the Risk Assessment Form evaluating the full scope of the work. Additional risk assessments may be undertaken during the course of the work if necessary.

The Risk Assessment Form covers the following.

- (i) **Specific Task/Activity**
The assessor together with users should document each major task associated with the task or activity. This should consider the sequential aspects of the work to be performed from commencement to finalisation of the work.
- (ii) **Potential Hazards**
The assessor together with users should identify the particular hazards associated with each activity or task to be carried out.
- (iii) **Class of Risk**
Each hazard should be evaluated as a level of risk, from very high to very low. Classification in this way provides an indication of priority in terms of determining risk control measures.
- (iv) **Control Measure**
The assessor together with users should identify and document what actions are necessary to eliminate or minimise the hazards that could lead to accident, injury or occupational illness.

(v) Action Plan

There may need for some control measures phased in over time. Therefore an action plan needs to be drawn up clearly outlined target dates and assigning responsibilities. If appropriate this can be incorporated into your annual Health and Safety Plan.

(vi) Monitoring

All control measures need to be monitored to ensure their effectiveness and ongoing reliability. Again, if appropriate, this can be an assigned responsibility in your annual Health and Safety Plan.

3.3 Safe Working Procedures

Where safe work procedures or instructions are developed they must clearly spell out the work sequence, highlighting the procedures required to adequately control each high and very high risk identified in the risk assessment. All employees involved in the activity shall receive appropriate training in the safe work procedure.

Appendix 1: Hazard Identification and Control Table

The following table provides examples of control measures for a range of generic hazards. These examples are provided as a guide only and important site specific factors must also be considered. Note also that this table of examples does not include all possible hazards.

Hazard	Possible Cause	Control Measure
1. Traffic Hazards	1.1 Vehicles entering, exiting a work site 1.2 Working in close proximity to roads	Use of traffic signalmen Installation of temporary traffic signals Use of Safety Signs Speed restriction signs displayed and enforced Use of witches hats or temporary barriers to cordon off sections of road Closure of road Use of Safety Signs Speed restriction signs displayed and enforced
2. Manual Handling	2.1 Handling of children or disabled people 2.2 Use of heavy hand held tools eg grass slasher 2.3 Handling of heavy objects	Use of wheel chairs Use of lifting aids Imposed restrictions on certain activities Requirements for two person lifts Training of employees Use of support harness Limits on duration of use Provide mechanical aids Redesign object or task
3. Contact with heat	3.1 Hot Materials 3.2 Fire in the Workplace 3.3 Exposure to sun	Provide appropriate protective clothing and training Keep workplace clear of waste materials Issue of hot work permit Remove flammable materials or store correctly Provide adequate fire fighting equipment Employee fire fighting training Eliminate ignition sources from flammable atmospheres Provide protective clothing and sunscreen Reduce exposure time
4. Contact with cold	4.1 Cryogenic Materials	Provide appropriate protective clothing and training
5. Contact with electricity	5.1 Faulty electric leads and tools 5.2 No earth leakage detectors 5.3 Electric leads on ground 5.4 Electrical leads in damp areas 5.5 Electric leads tied to metal rails 5.6 Plant not isolated 5.7 Contact with underground or overhead cables	Tools and leads inspected and tagged Residual current devices in all circuits Residual current devices tested regularly Electrical leads kept elevated and clear of work areas All electric leads kept dry All electric leads are kept insulated Ensure permit to work system followed Lock-out and equipment tag procedure Location of services to be established Overhead cables to be protected Services to be isolated when working in proximity Establish safe clearance distances
6. Exposure to Noise	6.1 Plant and equipment not silenced 6.2 Not wearing appropriate protection 6.3 Excessive exposure time to noisy areas	Fit noise suppression to noisy plant and equipment All personnel to wear appropriate PPE (hearing protectors) Regulate employee exposure to noise
7. Contact with High Pressure	7.1 Burst air lines 7.2 Hoses becoming uncoupled 7.3 Using compressed air to clean clothing 7.4 Improper handling of gas cylinders 7.5 Defective pressure gauges	Air hoses in good condition and regularly inspected All hose couplings fitted with pins or chains Prohibit and instruct employees on dangers Cylinders stored upright and secured All pressure gauges inspected regularly for defects

Hazard	Possible Cause	Control Measure
8. Contact with Chemicals	8.1 Incorrect handling procedures 8.2 Lack of information 8.3 Not wearing appropriate PPE 8.4 Incorrect storage 8.5 Elevated exposure levels	All employees trained in MSDS requirements Review Material Safety Data Sheet and assess risks All personnel provided with appropriate PPE Hazardous substances stored and labelled correctly Provide mechanical ventilation All personnel provided with appropriate PPE
9. Contact with Radiation	9.1 Exposure to arc welding 9.2 Not wearing appropriate PPE 9.3 Exposure during radiography operations 9.4 Exposure to lasers 9.5 Exposure to sun	Welding operations shielded All personnel wear appropriate PPE Correct procedures developed and followed Regular equipment check Follow documented safe work procedure for laser Provide protective clothing and sunscreen
10. Struck Against	10.1 Protruding objects in access routes 10.2 Not wearing appropriate PPE 10.3 Personnel running in the workplace	Protruding objects are removed or marked Provide appropriate PPE (hard hat, safety boots) Provide appropriate PPE & training Personnel exercise restraint and walk
11. Struck By Object	11.1 Objects falling from work platforms 11.2 Debris from grinding operations 11.3 Wind blown particles 11.4 Loads slung from cranes	All work platforms fitted with toe-boards Fence off areas below to prevent access Materials stacked securely All personnel wear appropriate PPE (hard hats) Secure loose objects to structure Personnel wear appropriate PPE Shield grinding operations All personnel wear appropriate PPE Loads not slung over personnel Taglines are used to prevent loads swinging Loads slung correctly
12. Fall from height	12.1 No handrails 12.2 Working outside handrails 12.3 Floor penetrations not covered 12.4 Ladders not secured 12.5 Unsafe area	All work platforms have secure handrails Persons wear full fall arrest type harness All floor penetrations covered or barricaded All ladders secured to prevent movement Ladders to extend at least 1m above landings Tag and fence to prevent access
13. Slips and Falls	13.1 Access routes obstructed by materials 13.2 Leads and hoses across access routes 13.3 Slippery surfaces 13.4 Safety footwear not appropriate 13.5 Poor visibility	All access routes kept clear of materials and debris All leads kept clear of ground or covered All surfaces used for access kept dry and in good condition Personnel wear appropriate safety footwear Provide adequate lighting
14. Caught Between, Entanglement	14.1 Operating plant 14.2 Moving plant 14.3 Moving loads 14.4 Loads tipping or swinging 14.5 Materials being positioned	Guarding of rotating plant and hand tools Safe work procedures to be followed Provide roll over cage protection Pre-start daily safety inspection Personnel kept clear when operating plant Fit reverse alarms to plant and check operation All personnel kept clear during crane operations Load slings properly secured Safe Work Procedures for moving heavy loads
15. Overstress	15.1 SWL exceeded during lifting operations 15.2 Sprains and strains	Compliance with SWL and radius charts on cranes All lifting gear checked regularly All personnel trained in manual handling techniques

Hazard	Possible Cause	Control Measure
16. Ergonomic Hazards	16.1 Poor work posture 16.2 Use of excessive force 16.3 Repetitive movements	Workstation to conform with ergonomic standards Seating to conform with ergonomic standards Training of employees Provide adequate task lighting Provide mechanical aids Modify workplace design Modify task requirements Job rotation
17. Asbestos Hazards	17.1 Accidental disturbance or contact	Asbestos materials identified and labelled Asbestos materials removed from workplace Safe work procedures developed
18. Biological Hazards	18.1 Needlestick injury 18.2 Potential exposure to harmful organisms 18.3 Potential exposure to HIV, hepatitis 18.4 Potential exposure to legionella bacteria	Provide appropriate waste disposal containers Provide employees with PPE Develop safe work procedures and train staff Maintain and regularly test containment arrangements Develop safe work procedures and train staff Immunisation program Develop safe work procedures and train staff Immunisation program Provide employees with PPE Implement microbial control procedures
19. Excavation/ Trenching	19.1 Collapse of earth 19.2 Fall into excavation 19.3 Asphyxiation 19.4 Inadequate access to excavation	Shoring to be provided in accordance with Code of Practice Shoring to be inspected regularly Provide barricades around excavation Provide exhaust ventilation and test atmosphere Provide safe access by steps or ladders
20. Plant Overturn	20.1 Crane overturn 20.2 Mobile plant overturn	Cranes to be set up on solid ground and away from edge of excavation Plant to be fitted with roll over cage protection Safe work procedures developed
21. Suffocation	21.1 Confined spaces - lack of oxygen in pipes, tunnels, restricted spaces 21.2 Asphyxiation due to displacement of oxygen - processes or machines that give off heavier than air gases. Cryogenic materials	Institute a permit and access system. Carry out testing. Use personal protection. Institute standard operating procedures. Carry out awareness training Provide appropriate ventilation

Appendix 2: Risk Assessment Proforma

This section contains a standard risk assessment proforma and some worked examples. These examples are provided as a guide only and important site specific factors must also be considered.

Note

Specific risk assessment documents are available for many activities on the [OHS website](#) for computer work-stations, chemicals, plant, manual handling, research projects and contractors.

Risk Assessment

Area/School/Section: Facilities Management

Activity: Repair of Road

OH&S (DWG) Representative: John Smith

Signature:

Name of Assessor: Fred Jones

Signature:

Date:

Telephone: 12345

Specific Task/Activity	Potential Hazards and Consequences	Class of Risk	Control Measures (Standard Operating Procedure)
<i>Occupation of work site Set up, during works, and final inspections</i>	<i>Public vehicles hitting workers or equipment</i>	<i>VH</i>	<i>Safety signage and traffic control procedures will conform with applicable regulations and codes of practice. This will include the use of safety signage (Beware Road Works Ahead) at least 300m before work area. Witches hats to divide off one lane. Plan work so that one side of road is repaired at a time.. Wearing of bright reflective safety jackets by workmen. SWP06: Traffic Management.</i>
<i>Operation of plant - compactor ("whacker")</i>	<i>crushing of feet</i>	<i>H</i>	<i>Wearing of safety footwear.</i>
	<i>manual handling resulting in strain/back injury</i>	<i>H</i>	<i>Provide training in safe use of equipment prior to operation. Two-man lifts to lift and lower compactor from truck.</i>
<i>Operation of plant - compactor/ jackhammer</i>	<i>noise exposure</i>	<i>H</i>	<i>Employees to wear hearing protectors when operating plant.</i>
<i>Operation of compressor</i>	<i>contact with high pressure</i>	<i>H</i>	<i>Hose couplings fitted with pins or chains. Hoses, couplings inspected as part of daily plant inspection.</i>
	<i>noise exposure</i>	<i>M</i>	<i>Noise control equipment fitted to compressor.</i>
<i>Handling and decanting fuels for compressor</i>	<i>fire, eye splashes</i>	<i>H</i>	<i>No smoking, handling of fuels in well ventilated areas, fire extinguishers on hand, wearing of eye protection.</i>
<i>Transport of equipment</i>	<i>equipment falling from truck causing traffic accidents</i>	<i>VH</i>	<i>Proper use of ropes, chain and straps to adequately secure equipment on vehicle.</i>
<i>Handling of hot tar</i>	<i>heat and chemical exposure</i>	<i>M</i>	<i>Use of protective clothing (gloves, overalls), ensure good hygiene and washing before lunch and at end of day.</i>
<i>Outside work - exposure to weather</i>	<i>sunburn</i>	<i>M</i>	<i>Wearing of suitable clothing, hats and provision of sun cream.</i>
<i>General</i>	<i>General</i>		<i>Employees will be supplied with protective gloves and hard hats supervised by foreman. Daily safety inspection to be conducted by supervisor and foreman.</i>

Risk Assessment

Area/School/Section: Child Care

Activity: Child Care

OH&S (DWG) Representative: Joan Smith

Signature:

Name of Assessor: Fred Johson

Signature:

Date:

Telephone: 12345

Specific Task/Activity	Potential Hazards and Consequences	Class of Risk	Control Measures (Standard Operating Procedure)
<i>Lifting and carrying of children and babies (from beds, change-tables etc)</i>	<i>manual handling causing injury to client</i>	<i>VH</i>	<i>Employees to use appropriate transfer aids provided (steps etc)</i>
	<i>manual handling resulting in strain/back injury</i>	<i>VH</i>	<i>Training provided on safe transfer techniques and methods</i>
<i>Operation of electrical appliances</i>	<i>contact with electricity - faulty leads/appliances</i>	<i>VH</i>	<i>Periodic electrical safety inspection to review condition of leads, appliances. Training on safe work methods</i>
<i>Use of cleaning chemicals</i>	<i>exposure to fumes and skin contact</i>	<i>H</i>	<i>Employees provided with list of prohibited cleaning products. Employees to wear personal protective equipment (rubber gloves, plastic aprons).</i>
<i>Vacuuming, sweeping and mopping</i>	<i>manual handling resulting in strain/back injury</i>	<i>H</i>	<i>Training provided on safe cleaning methods. Techniques focus on minimising lifting and bending.</i>
	<i>slips/falls</i>	<i>H</i>	<i>Ensure that appropriate footwear is used (rubber soled shoes).</i>
<i>Bathing activities</i>	<i>manual handling resulting in strain/back injury</i>	<i>H</i>	<i>Training provided on safe bathing techniques and aids which can be used.</i>
<i>Personal care</i>	<i>Client aggression (e.g.biting, scratching) resulting in bodily harm.</i>	<i>M - VH</i>	<i>Employees provided with behaviour management training. Appropriate service plans prepared for each client.</i>

Risk Assessment

Area/School/Section: Facilities Maintenance

Activity: General Gardening

OH&S (DWG) Representative: Will Smith

Signature:

Name of Assessor: Julie Johnson

Signature:

Date:

Telephone: 12345

Specific Task/Activity	Potential Hazards and Consequences	Class of Risk	Control Measures (Standard Operating Procedure)
Mowing and trimming operations	Stones or other objects hitting passers-by or buildings	VH	Safety signage and traffic control procedures will conform with safe work procedure Guards etc to inspected at start of each days work Operators to wear appropriate personal protection: safety glasses, boots, face-shields, hearing protection SWP08: Mowing in public areas
Operation of plant - shredder and chipper	noise exposure	H	Employees to wear hearing protectors when operating plant. SWP06: Operation of Shredders
	manual handling resulting in strain/back injury	H	Provide refresher training in safe use of equipment periodically including lifting technique.
Operation of gardening implements and tools	manual handling resulting in strain/back injury e	H	Routine inspection of implements to ensure adequate maintenance Refresher training in manual handling
Handling and decanting fuels for equipment	fire, eye splashes	H	No smoking, handling of fuels in well ventilated areas, fire extinguishers on hand, wearing of eye protection.
Transport of equipment	equipment falling from truck causing traffic accidents	H	Proper use of ropes, chain and straps to adequately secure equipment on vehicle.
Handling of gardening refuse	exposure to scratches, cuts	M	Use of protective clothing (gloves, overalls), ensure good hygiene and washing before lunch and at end of day.
Outside work - exposure to weather	sunburn	M	Wearing of suitable clothing, hats and provision of sun cream.
Exposure to hazardous refuse such as syringes etc	Risk of disease from cuts etc	M	Follow SWP09 when material is found. Ensure proper disposal. SWP09: Disposal of Sharps
General	General		Employees will be supplied with protective gloves and hard hats supervised by supervisor.

Risk Assessment

Area/School/Section: Faculty Office

Activity: Keyboard work and general office work

OH&S (DWG) Representative: Fred Smith

Signature:

Name of Assessor: Julie Johnson

Signature:

Date:

Telephone: 12345

Specific Task/Activity	Potential Hazards and Consequences	Class of Risk	Control Measures (Standard Operating Procedure)
<i>Data entry and general typing</i>	<i>Overuse injuries Eyestrain</i>	<i>H</i>	<i>Supervisors to ensure work-breaks are taken Screen based equipment assessment carried out annually Time created for exercise program Early reporting encouraged Workloads to be monitored by supervisor</i>
<i>Manual handling</i>	<i>manual handling resulting in strain/back injury</i>	<i>M</i>	<i>Provide refresher training in safe use of equipment periodically including lifting technique. Supervisor to make sure trolley is available</i>
<i>General office housekeeping</i>	<i>Slips and trips</i>	<i>M</i>	<i>Routine inspection of office by supervisor to maintain standards Periodic tidy-ups Review of storage requirements</i>