

# Work Safely at Heights

CPCCCM2012

Work Safely at Heights

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## Trainer's Marking Guide

with model answers



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**QUESTION 27** (PC 3.2, 3.4)

What environmental challenges should you be careful of when working?

- Asbestos from old buildings
- Damage to underground services
- Noise
- Fire
- Air pollution
- Damage to plants and trees
- Soil damage and erosion
- Leaking fuels

## Working at heights

### Chapter review questions



**QUESTION 28** (PC 3.1)

Lots of items need to be put up or fixed at heights. What are some of these?

- Signs and billboards
- TV and phone systems
- Roof and wall insulation
- Solar heating
- Air conditioning
- Roof fans
- Gutter guards
- Spouting and down pipes

**QUESTION 29** (PC 3.1)

What are some other types of work people might do at heights?

- Pest control
- Prune trees
- Painting plumbing or electrical work
- Building and construction
- Working on mezzanine floors
- telecommunications

**QUESTION 46** (PC 2.3)

People can be hurt or killed from objects falling from above. What are some ways to keep people safe below the work area?

- Scaffolding, hoarding or gantry.
- Barricades or safety fences to protect people.
- Flashing yellow hazard lights to warn people.
- Warning signs.
- Traffic control such as witches hats.
- A flag person to control traffic.

**QUESTION 47** (PC3.2)

Why must you regularly check your safety system?

To make sure it is still safe and works properly.

**QUESTION 48** (PC 3.2)

Why must you check your risk control measures once they are in place?

To make sure that they are working and keeping people safe.

**QUESTION 49** (PC 3.2)

You start a job, but then the type of work, site conditions or weather changes. Why do you need to recheck your safety controls?

To make sure that they still work for the changed conditions.

**QUESTION 50** (PC 1.4)

Which Acts and Regulations (laws) apply to working at heights?

- National Work Health and Safety Act 2012
- National Work Health and Safety Regulations 2012

**QUESTION 51** (PC 1.4)

Which codes of practice directly apply to working at heights?

- National Work Health and Safety Act 2012
- National Work Health and Safety Regulations 2012
- Managing the risk of falls at workplaces - National Code of Practice March 2015
- Preventing Falls in Housing Construction

**QUESTION 52** (PC 1.4)

Which Australian Standards apply to working at heights?

- AS 6001 – Working platforms for housing construction
- AS 1657– Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS 2550 – Cranes, hoists and winches - Safe use Set
- AS 1891 – Industrial fall arrest systems and devices
- AS 1576 – Metal scaffolding (known as the SAA Metal Scaffolding Code)
- AS/NZS 4576 – Guidelines for scaffolding

# Prevention of falls hierarchy of control measures

You must follow some steps when you plan how to get rid of or reduce the fall risk.



**Step 1: Work on the ground or a solid platform.**

Think of ways to do the job without working up high. This eliminates the chance of falling.

**Step 2: Passive fall prevention devices.**

Use equipment that totally stops you from being able to fall. For example, guard railing, roof safety mesh, edge protection and work platforms.

**Step 3: Work positioning systems**

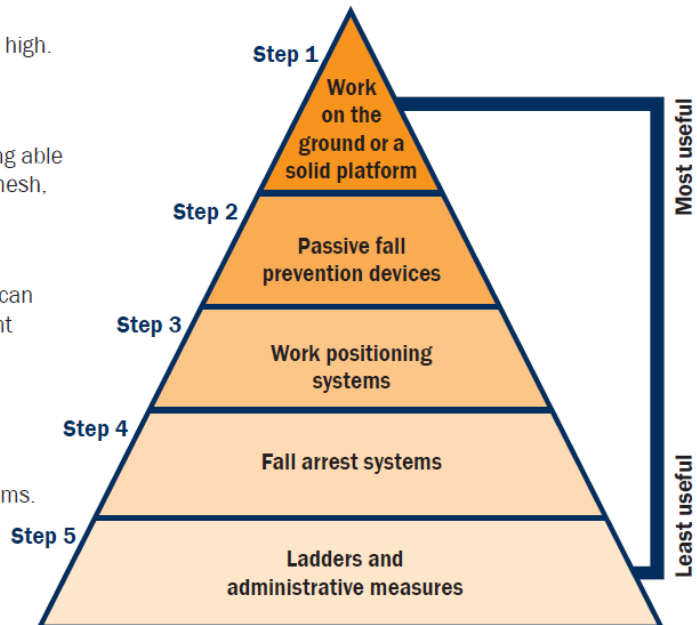
Use equipment to position the person so they can do the work safely. This includes travel restraint systems and industrial rope access systems.

**Step 4: Fall arrest systems**

These systems are designed to 'catch' or stop you if you fall. They include catch platforms, industrial safety nets and safety harness systems.

**Step 5: Ladders and administrative measures**

Working from ladders, or using different ways to do the work are last on the list of controls.



The pyramid shows the five steps in the 'Prevention of falls hierarchy' in order from the best choice of control to the last.

## Step 1 – Work on the ground or a solid platform

### Chapter review questions

**QUESTION 53** (PC 2.2)

The first step in the working from heights hierarchy of controls is 'work on the ground or a solid platform'. What must a 'solid platform' have?

- A surface strong enough to support the people and equipment that will be working on it.
- An even surface, which is not too steep (less than 7o) or slippery. It must have grip and be easy to walk around.
- A safe way to get on and off.
- Barriers around the edges to stop people from falling off.

**QUESTION 54** (PC 1.2, 2.2)

Think about the following types of work. How could you do the work from the ground?

- Get a ball out of a gutter – Use ball retrieval equipment.
- Pruning hedges or trees – Use a long handled hedger or pole pruners.
- Removing leaves from a gutter – Use a long handled cleaning device. Install a gutter guard. Use a blower or pressure washer. Install the air conditioner on the ground instead of mounting it up high.
- Install an air conditioner - Install the air conditioner on the ground instead of mounting it up high.
- Inspect a roof for pests - use infrared devices to scan the roof cavities, ceilings and walls.

**QUESTION 55** (PC 1.4)

What is a fall protection cover?

A cover-over which is fixed over holes or openings to stop people falling through. They are usually made of timber, plywood, metal sheeting, or mesh.

**QUESTION 56** (PC 1.4)

How strong should a fall protection cover be?

Strong enough to hold the weight of a person falling.

**QUESTION 57** (PC 1.4)

Can you work on a fall protection cover made of steel mesh?

No. Mesh fall protection covers should have another cover over the top to stop tools falling through.

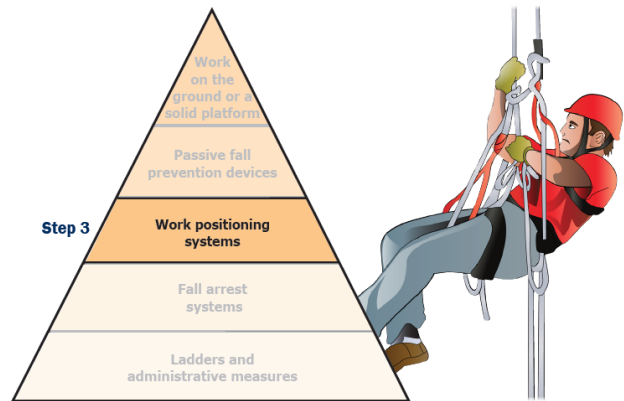
**QUESTION 58** (PC 1.4)

Why do you need a sign on a fall protection cover? What should it say?

To warn people that there is a hole underneath. It should say 'danger hole beneath'.

## Step 3 – Work positioning systems

### Chapter review questions



**QUESTION 77** (PC 2.1)

What are the two (2) types of work positioning systems?

1. Industrial rope access system.
2. Travel restraint system.

**QUESTION 78** (PC 2.1 )

What is an industrial rope access system? Who is allowed to use it?

It is a system of ropes used to gain access to an area.

You can only use it if you have successfully completed a competency based course.

**QUESTION 79** (PC 2.1)

What is a travel restraint system?

You wear a harness which is connected to a lanyard. The lanyard is anchored to stop you going near an edge where you could fall.

Sometimes the lanyard is anchored from a single anchor point, and sometimes from a static line.

The most important thing about a travel restraint system is that you cannot reach an edge where you could fall.

**QUESTION 80** (PC 2.1)

How do you safely set up a restraint system?

Before you start work. If you use a single anchor point make sure the restraint line is not long enough that you could fall. If you use a static line make sure that you can't reach an edge anywhere along the static line.

**QUESTION 81** (PC 2.3)

In what situations would a fall restraint system not be suitable?

- If you can reach an edge where you could fall.
- If the roof slope is over 15 degrees.
- If the restraint line can be adjusted to a length where you could fall.
- If you could fall through the surface, for example, a brittle roof.

**QUESTION 82** (PC 2.3)

What is a static line?

A static line is a horizontal line mounted above your head. Usually they are made from steel wire rope. To use a static line you wear a harness, and anchor from the static line using a lanyard with a personal shock absorber.

**QUESTION 83** (PC 2.3)

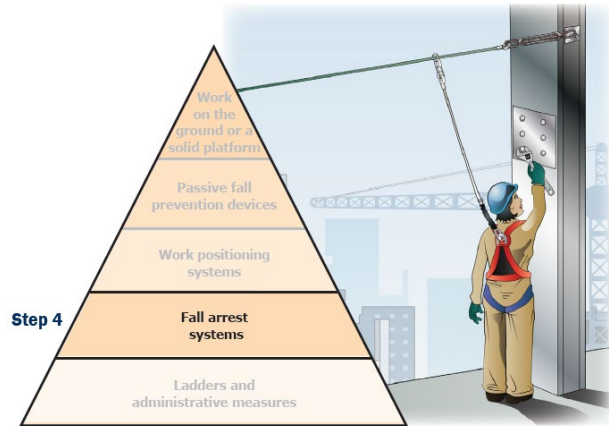
Who is allowed to put up a static line?

A competent person. This means someone who has had training on how to do it properly. In some states you may need a basic rigging or basic scaffolding licence.



## Step 4 – Fall arrest systems

### Chapter review questions



**QUESTION 84** (PC 2.2)

What type of equipment makes up a fall arrest system?

- Industrial safety nets
- Catch platforms
- Safety harness systems

**QUESTION 85** (PC 2.2)

You are going to use a fall arrest system. What safety concerns do you need to think about?

- You must choose, install and use the equipment correctly.
- You make sure fall distance is as short as possible.
- Wear head protection to protect you if you fall.
- Make sure the equipment and anchors can withstand the force that will be applied in a fall.
- Make sure that the equipment that has been used in a fall is not used again.
- Make sure that all equipment is tested and tagged by a competent person.

**QUESTION 86** (PC 2.2)

What is an industrial safety net?

A net which is put up to catch someone if they fall. They must be put up by a person with a rigging or basic scaffolding licence.

**QUESTION 87** (PC 2.2)

What are some problems or situations that can stop you from using a safety net?

- Things stacked on top of the net.
- Debris, dirt and rubbish.
- Chemical damage.
- Damage from gasses or ash.
- If the net has not been set up properly.
- Scaffold bent out of shape.

**QUESTION 88** (PC 3.2)

What is a catch platform?

A platform which can catch you if you fall. They are usually a scaffold.

**QUESTION 89** (PC 3.2 )

What are the main safety features of a catch platform?

- Must angle back to the working platform, or it must have extended guard railing.
- Have a fully planked deck.
- Extend 2 metres beyond the unprotected edge.
- Be set up as close to the underside of the fall area as possible. This reduces how far you could fall.

**QUESTION 90** (PC 3.2)

What type of equipment makes up an individual (harness) fall arrest system?

- Anchorages
- Lifelines
- Inertia reels
- Lanyards
- Twin tailed lanyards
- Rail system
- Harness
- Rope and wire grabs
- Carabiners (double or triple action)
- Rescue equipment
- Shock absorbers
- Snap hooks

**QUESTION 91** (PC 3.2)

Can you work on a harness fall arrest system by yourself?

No. You must work with someone who knows the rescue plan. They must be able to use the equipment needed to rescue you if you fall.

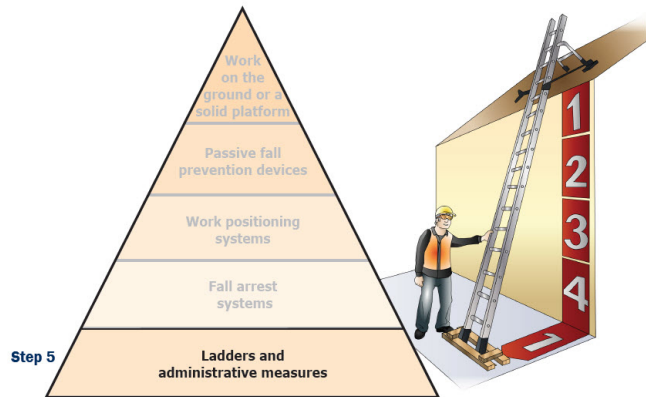
**QUESTION 92** (PC 3.2)

When do you use static lines?

- If you are working close to an unprotected edge.
- If you are working on a slippery or sloping surface.

## Step 5 – Ladders and administrative measures

### Chapter review questions



#### QUESTION 145 (PC2.3 )

What are some safety problems that stop you from using a ladder?

- Bent, twisted, kinked or damaged welds or feet on metal stiles.
- Cracked, bruised, splintered or out of shape timber stiles.
- Worn, broken or missing ropes, brackets and bracers.
- The ladder is painted.
- Loose, damaged or missing steps, rungs and top plates.
- The ladder is not strong enough. All ladders must be rated to 120 kilograms (heavy duty).

#### QUESTION 146 (PC 2.3)

What sort of ladder would you use for electrical work?

You must use a fibreglass ladder which cannot conduct electricity.

#### QUESTION 147 (PC 2.3)

If you use a ladder, the employer must reduce the risk of a fall. What 3 things does the law say the employer must make sure of?

- The ladder is fit for the job. For example, the right height for the work you are doing.
- The ladder is appropriate. For example, you cannot use a metal ladder for electrical work. The appropriate ladder would be fibreglass.
- The ladder is set up correctly. For example, it must be properly secured top and bottom, have the right amount of overhang, be stable, etc.

**QUESTION 153** (PC 2.2)

How does a no go area keep people safe?

It keeps people away from the area where they could get injured.

For example, it might keep you out of an area where you could get hit by falling tools or equipment. Or it may keep you away from an edge where you could fall.

**QUESTION 154** (PC 1.4)

How can a permit system keep you safe?

Only people who have been trained (and have a permit) can go near the hazard. These people know about the hazard and how to work safely near it.

**QUESTION 155** (PC 1.1)

How can organising when the work gets done keep people safe?

It stops too many people working in the area at the same time. You should get rid of the need for people to work above other people if you can.

**QUESTION 156** (PC 2.4)

What other administrative measures (safe work procedures) can you think of that help keep people safe? Use examples not already mentioned in this guide.

You will discuss your answers with your trainer.

**QUESTION 157** (PC 1.4)

You are using administrative controls as the only way of controlling a fall hazard which is 2 metres high. Why do you need to document this?

You are required to by law. You must keep records to show that you thought about other ways to do the work safely. You must keep your records until the work is completed. A JSEA or SWMS would be a good record.

# Clean up

## Chapter review questions



**QUESTION 158** (PC 3.4)

When removing scaffolding, what hazards do you need to plan for?

- Dropping tools or equipment.
- Falling from an unprotected edge.
- Moving equipment from the scaffold safely to the ground.
- Making sure workers and pedestrians are safe.
- Safe ways of entering or exiting the work area.
- Don't leave equipment where it could cause a tripping hazard.
- Only an experienced competent person should set up scaffolding.

**QUESTION 159** (PC 1.4 )

Where should you store your harness fall protection equipment?

- In a cool dry place, away from moisture, humidity, heat and chemicals.

**QUESTION 160** (PC 3.4)

Why it is important to make sure your fall protection equipment is clean after use?

Because dirt, paints, or solvents can damage the equipment.

**QUESTION 161** (PC 3.4)

You have finished working. What do you have to do to clean up the site?

- Put away barriers and bollards. Take down signs.
- Take down safety nets or scaffold. This must be done by a competent person.
- Remove tools and equipment.
- Throw out or recycle any rubbish.

# Practical Tasks - Instructions to trainer

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## Overview of practical tasks

There are 3 practical tasks in this course. Each practical task requires you to give the students a description of work. The descriptions of work are located at the end of this document. You can use these, or write your own. You'll also need to show students a heights work area. It is best if the heights work area is the area where the students will do their heights training.

The practical tasks are designed to be done in order. You can use the same work description throughout. Work descriptions are supplied at the end of this document, but you can also write your own.

**Note for the competency unit RIIWHS204D:** During training or assessment, each student must be given access to various workplace situations at height, including for example, towers, walkways, scaffolding.

## Example of how the tasks fit together:

Here is an example of how the practical tasks are designed to be delivered. In this example the Students have been given the 'Painting' description of work as follows:

*You will be painting a large 'No go area' on the work area. You will need to clean the area down with degreaser, stencil out the 'No Go Area' text' with masking tape and paint it in 2 pack paint. You will need approximately 40 litres of paint to do the job.*

### 1. Practical task 1 – Work requirements, procedures and instructions.

You give students the work description and show students the heights work area. They then fill out a 'Work Requirements, Procedures and instructions' worksheet. While working through the worksheet and JSA or SWMS students would identify things like, manual handling of paint (40 litres = 40kg), MSDS/SDS for using 2 pack paint and degreaser. Also include the tools and equipment they'll need for the job, brushes, paints etc.

### 2. Practical task 2 – Working at heights rescue plan

Students will fill out the 'Working at heights rescue plan' and in the 'Work Details' enter 'Painting No Go Area – using degreaser and 2 pack paint'. They plan for the equipment they'll need to work from heights.

### 3. Practical task 3 - Work at heights

The tools and equipment mentioned in task 1 are moved to the work area. Paint tins, rollers, brushes, handles, etc. The fall prevention equipment mentioned in task 2 are installed, checked or adjusted as needed. The tools and equipment are then packed up and stored correctly.

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## Descriptions of Work

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You must give the students a description of a type of work they would be performing. You can give one of the following examples, or you can write your own. It is up to you as the trainer to decide which work situation most suits your learners, or your training environment. You can print these out, give verbal examples, or write them on the board.

### Description of work 1: Painting

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You will be painting a large 'No go area' on the work area. You will need to clean the area down with degreaser, stencil out the 'No Go Area' text with masking tape and paint it in 2 pack paint. You will need approximately 40 litres of paint to do the job.

### Description of work 2: Plumbing

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You will be repairing some storm water pipes on the upper level. You will need to replace a 3metre section of pipe which has been damaged. You will need to take any pipes, primer, glue, fittings etc to the work area.

### Description of work 3: Construction Metal Work

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Pre-engineered mounting brackets need to be welded to an existing beam. The beam has been galvanised so it must be grinded around the area to be welded first. You will need to take the grinder and welder to the work area.

### Description of work 4: Telecommunications

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You will be accessing the area to install a satellite dish weighing 45kg. You will need to install and position the dish, and run cabling through down to the ground level to connect to the television. The dish will need to be bolted solidly to the structure and the cable needs to be tied off every 700mm.

# Score for Knowledge Assessment

## Work safely at heights CPCCCM2012



| Knowledge Assessment     |  |
|--------------------------|--|
| Correct answers:         | _____ / 161  |
| PASS                     | 130+ answers correct                               |
|                          |  |
| Percentage:              |  |
| Result (circle):         | Satisfactory                      Not satisfactory |
| Trainer/supervisor name: |  |
| Trainer/supervisor ID:   |  |
| Signature:               |  |
| Student name:            |  |
| Student ID               |  |
| Student signature:       |  |

Assessor comments to clarify assessment results:

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If you have any questions about your results, speak to your trainer/supervisor.



# Score for Practical Tasks

| Practical Assessment Tasks                                  |              |                      |
|---|--------------|----------------------|
| Practical Task 1  | Satisfactory | Not yet satisfactory |
| Practical Task 2  | Satisfactory | Not yet satisfactory |
| Practical Task 3  | Satisfactory | Not yet satisfactory |
| PASS – All tasks must be completed to a satisfactory level. | Satisfactory | Not yet satisfactory |

Assessor comments to clarify assessment results:

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If you have any questions about your results, speak to your trainer/supervisor.

## Successful completion of course

| If course delivered by a company   | If course delivered by a registered training organisation (RTO)   |
|--|---|
| <p>You will receive a Statement of Satisfactory Completion if your assessment is successful. You may also receive a convenient business sized card with the relevant company details to keep as proof of competency.</p>  | <p>You will receive a Statement of Attainment if your assessment is successful. You may also receive a convenient business sized card with the RTO's relevant details to keep as proof of competency.</p>  |