

RIICRC206E

Install Pre-Cast Concrete Crash Barriers

Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course training content (this matches the PowerPoint Presentation).
- Review questions.

What do you need to do before you use it for the first time?

1. Rebrand the document.
2. Review the document as part of your validation process.

See the 'Read Me First' document for a complete set of instructions on how to use these resources.



LEARNER GUIDE

RIICRC206E Install Pre-Cast Concrete Crash Barriers

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

This Book Contains:

- Course Information.
- Review Questions.

Table of Contents

1.1 Introduction	4
1.2 Working Safely	4
1.2.1 Health and Safety Rules	4
1.2.2 Operations Documentation	5
1.2.3 How to Keep Everyone Safe	5
Review Questions	6
1.3 Work Instructions	7
1.3.1 Reading and Checking Your Work Instructions	7
1.3.2 Project Quality Requirements	8
1.3.2.1 Plans, Drawings and Sketches	8
1.3.3 Worksite Communications	8
1.3.3.1 Communicating with Others	9
Review Questions	10
1.4 Emergency Procedures	12
1.4.1 Emergency Response	12
1.4.2 Emergency Shutdown of Equipment	12
1.4.3 Evacuation	12
1.4.4 First Aid	13
1.4.5 Fire Fighting Equipment	13
Review Questions	14
1.5 Identify and Manage Risks and Hazards	14
1.5.1 Identify Hazards	14
1.5.2 Assess Risks	15
1.5.3 Control Hazards	17
1.5.3.1 Personal Protective Equipment	18
1.5.3.2 Traffic Control Barricades and Signage	19
1.5.4 Environmental Protection Requirements	20
1.5.4.1 Ground Conditions	21
1.5.4.2 Waste Management	21
Review Questions	22
2.1 Select and Check Tools and Equipment	26
2.1.1 Common Tools and Equipment	26
2.1.2 Conduct Routine Checks	27
2.1.3 Manufacturer Documentation	28
2.1.4 Equipment Limitations	28
2.1.5 Reporting Faults and Defects	28
Review Questions	29
2.2 Concrete Crash Barriers	31
2.2.1 Erect Concrete Crash Barriers	31
2.2.2 Setting Out Barrier Positions	31
2.2.3 Erecting Crash Barriers	32
2.2.4 Joining Crash Barriers	33
2.2.5 Sealing and Finishing Barriers	33
Review Questions	34
2.3 Clear Work Area and Store Materials and Equipment	36
2.3.1 Clearing the Work Area	36
2.3.1.1 Disposal or Recycling of Materials	37
2.3.2 Stacking or Storing Unused Materials	37
2.3.3 Cleaning and Storing Tools and Equipment	38
Review Questions	38

1.1 Introduction

These materials are based on the national unit of competency **RIICRC206E Install Pre-Cast Concrete Crash Barriers**.

You will learn about:

- ◆ Planning and preparing for work.
- ◆ Erecting or installing concrete crash barriers.
- ◆ Cleaning up the work area.



1.2 Working Safely

You must follow all safety rules and instructions when performing any work. If you are not sure about what you should do, ask your boss or supervisor. They will tell you what you need to do and how to do it in a safe way.



1.2.1 Health and Safety Rules

Every workplace has to follow laws and rules to keep everyone safe. There are 4 main types:

Rule	Explanation
Acts	These are laws that you have to follow.
Regulations	These explain what the law means.
Codes of Practice	These are instructions on how to follow the law, based on industry standards.
Australian Standards	These tell you what the minimum requirement is for a job, product or hazard.

Some states use OHS laws, and other states use WHS laws. They both talk about the same thing, but use different words or names for people. If you have any questions about safety rules you should talk to your boss or supervisor.

1.2.2 Operations Documentation

Before starting your work you need to make sure you have access to all operations documentation for the job. This will help you to do your work in the safest way and make sure all work is compliant.

Operations documentation includes:

Site Details	The information and safety requirements of the workplace environment (where you will be working).
Hazard Details	Any hazards in the work area or related to the work. This could also include instructions on how to handle dangerous or hazardous materials.
Task Details	Instructions of what the work is or what you will be doing (this can include diagrams or plans). Also instructions on how to safely do the job.
Faulty Equipment Procedures	Isolation procedures to follow or forms to fill out.
Signage	Site signage tells you what equipment you need to have, or areas that are not safe to be in.
Emergency Procedures	Instructions on what to do in emergency situations, for example if there is a fire, accident or emergency where evacuation or first aid is needed.
Equipment and Work Instructions	Details of how to operate plant and equipment and the sequence of work to be done.

1.2.3 How to Keep Everyone Safe

WHS law says that all companies and workers need to keep themselves and other people safe while they work. This is called a duty of care.

To keep yourself and other workers safe you need to:

- ◆ Follow your instructions.
- ◆ Follow all workplace rules.
- ◆ Make sure all equipment is safe to use.
- ◆ Carry out your work safely.
- ◆ Report any problems.



If you think something is dangerous tell your boss or supervisor as soon as possible.

Your worksite will also have instructions for working safely including:

- ◆ Emergency procedures, including using fire fighting equipment, first aid and evacuation.
- ◆ Handling hazardous materials.
- ◆ Safe operating procedures.
- ◆ Personal protective clothing and equipment.
- ◆ Safe use of tools and equipment.



Review Questions

1.	What are the four (4) main types of health and safety rules that you need to follow?	<input type="checkbox"/>
1.		
2.		
3.		
4.		

2.	What information could you get from operations documentation?	<input type="checkbox"/>

1.3 Work Instructions

You need to be clear about what work you will be doing. Make sure you have everything about the job written down before you start. This includes what you will be doing, how you will be doing it and what equipment you will be using.

Make sure you have all of the details about where you will be working. For example:

- ◆ **The Site** – Is there clear access for all equipment? Are there buildings, structures, facilities or traffic in the way?
- ◆ **The Weather** – Is there wind, rain or other bad weather? Is it too dark?
- ◆ **Facilities and Services** – Are there power lines or underground services to think about?
- ◆ **Traffic** – Are there people, vehicles or other equipment in the area that you need to think about? Do you need to get them re-directed? Do you need barriers, signs or traffic controllers?
- ◆ **Hazards** – Are there dangerous materials to work around or think about? Will you be working close to traffic or machinery?



You also need to make sure you have all of the details about the kind of work you will be doing:



- ◆ **The Task** – Where will concrete barriers need to be installed? Are they easily accessible? Will you be working as part of a team? How many barriers will need to be installed? Will they be a permanent fixture?
- ◆ **Equipment and Materials** – What type of equipment will be used? How big is it? How much room does it need?
- ◆ **Communications** – How are you going to communicate with other workers?
- ◆ **Procedures and Rules** – Do you need any special permits or licences? Are there site rules that affect the way you will do the work?

1.3.1 Reading and Checking Your Work Instructions

All work needs to follow worksite, environment and company safety procedures.

Procedures help to make sure that all work is done in a safe way, without damaging equipment or putting people in unsafe situations. They also help to make sure that work is done in the correct order and doesn't interrupt or get in the way of other work that is happening on the site.

Your work instructions will tell you the safest way to do the job, and the equipment that you will need to use. It is a good idea to check your work instructions with your boss or supervisor to make sure you know exactly what you need to do.

If you don't know where to get your instructions or you can't understand them, you can ask your boss or supervisor. They will tell you where to find your work instructions and explain what they mean.



1.3.2 Project Quality Requirements

Every civil construction project will have quality requirements. These outline when tasks need to be completed and the required standard of the work.

Your work instructions and plans or drawings will guide you, and help you to make sure you are achieving the quality standard for the project.

Quality requirements can include details about:

- ◆ Project dimensions.
- ◆ Project tolerances.
- ◆ Standards of work.
- ◆ Material standards.



1.3.2.1 Plans, Drawings and Sketches

Some of your work instructions might be given to you in drawings and sketches. You will need to get the information out of these and use it to do your job.



Project plans and drawings give you an overview of the site, for example:

- ◆ Location of the site and earthworks in relation to the surrounding area.
- ◆ The position of structures, roads, access areas.
- ◆ Layout of drainage lines.
- ◆ Foundation details and landscaping features.

Depending on the project, drawings may be very detailed or they could be simple sketches.

You should learn about the conventions and symbols used in the plans and drawings so you can understand what the information means.

1.3.3 Worksite Communications

It is important to coordinate your activities with other workers when you are planning for and carrying out the work to make sure everyone knows:

- ◆ The work being completed.
- ◆ How, when and where you will be operating.
- ◆ What they need to do.



All workers on site must understand their own role and the roles of others before starting work. It helps to make sure work is done safely and efficiently.

You will also need to alert personnel to any hazards you notice during your work activities, including changing work environments.

People you may need to communicate and coordinate with on site include:

- ◆ Supervisors and management.
- ◆ Plant and vehicle operators.
- ◆ Traffic controllers or other workers on the site.
- ◆ Team leaders.
- ◆ Site safety personnel.
- ◆ Processing plant operators.
- ◆ Maintenance workers.
- ◆ Crane and float operators.
- ◆ Contractors.
- ◆ Inspectors, both internal and external, including WHS, environmental and quality assurance officers.
- ◆ Site visitors.



1.3.3.1 Communicating with Others

When communicating with others on site, make sure that you:



- ◆ Speak clearly and unambiguously – stick to the important details, don't waffle.
- ◆ Give instructions or directions so that they are easily understood.
- ◆ Provide complex information or explain issues to your listener in a way that ensures they understand. You could try breaking down the details, simplifying the information or referring to related examples.
- ◆ Listen carefully, answer questions and provide clarification as necessary. You can also ask questions to clarify understanding.
- ◆ Use all communications equipment appropriately, following the required procedures and protocols.

Communication equipment you might need to use includes:

- ◆ Two-way radios.
- ◆ Telephones.
- ◆ Written reports.
- ◆ Emails.
- ◆ Text messages.
- ◆ Other site-specific systems.



Make sure that you follow your site procedures and protocols for communicating on site. This may include using the correct communication processes for communicating work activities or exclusion zones.

Review Questions

3.

Why is it a good idea to check your work instructions with your boss or supervisor?

4.

What details are outlined in project quality requirements? Provide two (2) examples.

1.

2.

5.

List four (4) examples of information that can be included in project plans and drawings.

1.

2.

3.

4.

6.

Why is it important to coordinate with other personnel on site?



7.

When communicating on site, what can you do to ensure understanding?



Evaluation Only

1.4 Emergency Procedures

It is important that you know what to do in the event of an emergency. Your worksite will have standard actions that should be taken during an emergency.



1.4.1 Emergency Response



Emergency procedures will vary depending upon the worksite. These procedures could include:

- ◆ Emergency shutdown.
- ◆ Evacuation.
- ◆ First aid.
- ◆ Firefighting.

1.4.2 Emergency Shutdown of Equipment

If there is a fire, emergency or accident you might need to use the emergency stop on the equipment you are using. This will turn the equipment off immediately.

You can also use the emergency stop if the equipment stops working properly or you lose control of the equipment.



1.4.3 Evacuation



Things to remember are:

1. Keep calm.
2. Move away from the danger to a designated evacuation point, sometimes called an emergency assembly area.
3. Do not let other people into the area.
4. Call emergency services in accordance with workplace procedures and policies.

1.4.4 First Aid

First Aid is the quick care given to an injured or ill person. Every site will have a First Aid Officer.

If somebody needs first aid you must tell your supervisor or First Aid Officer. Do not try to give first aid if you have not been trained.



1.4.5 Fire Fighting Equipment



Fire fighting equipment on site could be anything from small fire extinguishers through to large water cannons. Different fire fighting equipment should be used for different types of fire. Always check the equipment for information on what type of fire it can be used on.

Steps for using a fire extinguisher:

1. Evacuate the area.
2. Isolate the area.
3. Call emergency services or other designated on site procedure.
4. If it is safe to do use an extinguisher to attempt to control the fire using the PASS system.

The PASS system:

P	Pull the pin.
A	Aim at the base of the fire.
S	Squeeze the trigger.
S	Sweep the base of the fire.

Contact your site emergency management team as soon as possible and call the fire brigade on 000.

Review Questions

8.

What emergency situations are generally outlined in site emergency procedures?



1.5 Identify and Manage Risks and Hazards

Before you start work, you need to check for any hazards or risks in the area.

If you find a hazard or risk you need to do something to control it. By lowering or removing risks we can make hazards less dangerous. This will help to make the workplace safer.



1.5.1 Identify Hazards

A **Hazard** is a thing or situation with the potential to cause harm or damage.

Part of your job is to look around to see if you can find any hazards before you start any work.

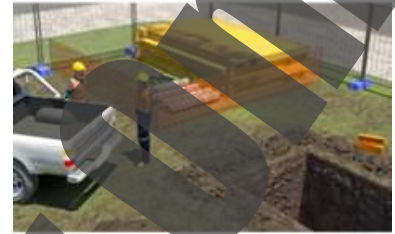
When you start checking for hazards, make sure you look everywhere. A good way to do this is to check:

- ◆ Up high above your head.
- ◆ All around you at eye level.
- ◆ Down low on the ground (and also think about what is under the ground).



Some hazards you should check for in the work area:

- ◆ Overhead and underground services.
- ◆ Uneven, soft, slippery or unstable terrain.
- ◆ Trees.
- ◆ Fires.
- ◆ Bridges.
- ◆ Excavations.
- ◆ Buildings.
- ◆ Traffic.
- ◆ Embankments.
- ◆ Cuttings.
- ◆ Insufficient lighting.
- ◆ Hazardous materials.
- ◆ Hot or sharp materials.
- ◆ Structures such as site offices and scaffolds.
- ◆ The weather and environment.
- ◆ Other workers or site visitors.
- ◆ On site vehicles, plant, equipment and machinery.
- ◆ Poorly maintained or faulty equipment.
- ◆ Road surfaces and edge solidity.
- ◆ Chemical hazards such as fuel, chemicals, contaminants, gases or dusts.



1.5.2 Assess Risks



A **Risk** is the chance of a hazard causing harm or damage.

Once you have identified the hazards on site or related to the work you will be doing you may be required to assess their risk level.