

Presentation Instructions

Who is this presentation for?

The trainer and learners.

What is in this Presentation?

- Course information that matches the Learner Guide content.
- Review questions and model answers.
- Slides contain summarised content, with full notes and information for the trainer, visible when the slide show is shown in "Presenter View" (see instructions on next slide).
- Use this presentation to support and reinforce the training information from the Learner Guide.

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

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

Instructions for Viewing in Presenter View

NOTE: This view is only applicable when the computer is connected to a second screen or a data projector.

Once the second screen/projector is connected make sure that the "Use Presenter View" box is ticked.

This is found in the "SLIDE SHOW" tab as shown below.



ALICORP306

CONDUCT EARTHWORKS



TRAINING
PRESENTATION

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Training Presentation Sections

Click on a box to go to that section.



Section 1:
Plan & Prepare for Work



Section 2:
Set Out the Work Area



Section 3:
Form & Conduct Earthworks

Section 1: Plan and Prepare for Work



1.1 Introduction

This course is based on the national unit of competency **RIICRC306E Conduct Earthworks.**

You will learn about:

- ◆ Planning and preparing your work.
- ◆ Setting out sub-grades.
- ◆ Forming earthworks.
- ◆ Placing and compacting sub-grade replacement materials.
- ◆ Cleaning up the work area.



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- ◆ Cleaning up the work area.

1.1.1 What are Earthworks?

Earthworks are civil construction works created by processing soils and materials into structures such as roads and walls. It generally involves machine excavation, compaction and backfilling.

Earthworks may include the:

Action	Cutting and filling of areas with existing material.
	Forming of existing materials.
	Replacement of unsuitable materials.
	Stabilisation of unsuitable materials.
	Use of geo-synthetic materials.

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Action and Description

Cutting and filling of areas with existing material.

Materials may be added or removed from an area to create the desired surface and level.

When material such as earth or rock is removed it is described as 'cut', and when materials are added they are referred to as 'filled'.

A job involving both cutting and filling may require workers to fill areas with the same materials which were removed from other sections of the worksite.

Forming of existing materials.

Forming involves using materials to create the desired configuration. This may involve using a range of materials including existing materials from the area, materials bought in from off-site or a mixture of both.

Replacement of unsuitable materials.

Some materials on site cannot be reused as part of the work due to their composition and must be replaced with something more appropriate for the

job.

Stabilisation of unsuitable materials.

When unstable materials are not entirely removed from the earthworks site they must be stabilised using other materials, plant and equipment.

Use of geo-synthetic materials.

Synthetic materials may be used to stabilise the area where earthworks are being completed. These require specialised preparation to ensure they remain in good condition.

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1.1.1 What are Earthworks?

Work areas where earthworks are conducted may include:

- ◆ Haul roads.
- ◆ Formed/prepared roads.
- ◆ Access roads.
- ◆ Pads.
- ◆ Dam walls.



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Section 1 Review Questions

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Section 1 Review Questions

2. What is meant by the term 'forming' in earthworks?



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Section 1 Review Questions

2. What is meant by the term 'forming' in earthworks?

Using materials to create the desired configuration.



1.2 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.



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1.2 Work Instructions

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

- ◆ The site.
- ◆ The weather.
- ◆ Facilities and services.
- ◆ Traffic.
- ◆ Hazards.



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 moved out of the area? Do you need to set up barriers or signs?
- ◆ **Hazards** – Are there dangerous materials to work around or think about? Will you be working close to traffic or machinery?

1.2 Work Instructions

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- ◆ The task.
- ◆ Equipment and materials.
- ◆ Communications.
- ◆ Procedures and rules.



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- ◆ **The Task** – What type of earthworks needs to be conducted? How big is the area? How long will it take?
- ◆ **Equipment and Materials** – What type of equipment will be used? How big is it? How much room does it need? Are there any special materials or chemicals that will be used?
- ◆ **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?

1.2.1 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.



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1.2.1 Reading and Checking Your work Instructions

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.

In some situations you may be required to put together a clear set of instructions from various sources. To do this you may need to understand and obtain relevant information from site drawings, blueprints or plans.



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1.2.2 Project Specifications

Some of your work instructions might be given to you in plans, maps, reports and specifications. You will need to get the information out of these documents and use it to do your job.

Project specifications will tell you the types, quantities, grades and classifications of materials you will be working with.



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Every task or activity relating to conducting earthworks will also have quality requirements relating to:

- ◆ Compaction.
- ◆ Drainage.
- ◆ Levels.
- ◆ Slope.
- ◆ Shape.
- ◆ Material standards.



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