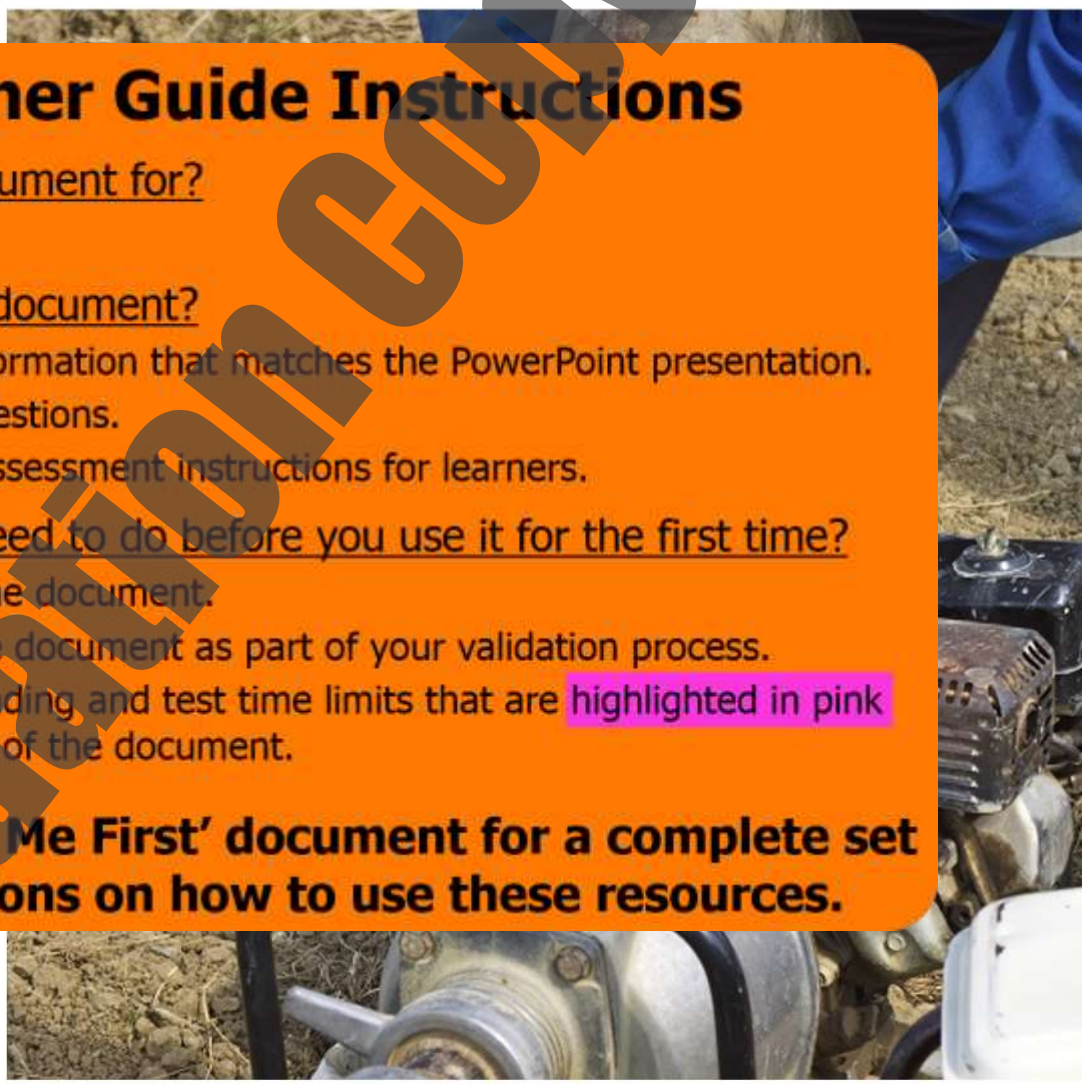
RIIWMG301D

Control Construction Site Water Table



Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course information that matches the PowerPoint presentation.
- Review questions.
- Practical assessment instructions for learners.

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.
3. Set the reading and test time limits that are highlighted in pink at the end of the document.

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

LEARNER GUIDE

RIIWMG301D Control Construction Site Water Table

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

This Book Contains:

- ☐ Course Information.
- ☐ Review Questions.
- ☐ Practical Assessment overview and instructions.

Table of Contents

1.1 Introduction

These materials are based on the national unit of competency **RIIWMG301D Control Construction Site Water Table.**

You will learn about:

- Planning and preparing for site water table construction.
- Installing drainage and dewatering systems.
- Establishing water treatment systems.
- Operation, maintenance and removal of the systems.
- Cleaning up the areas.

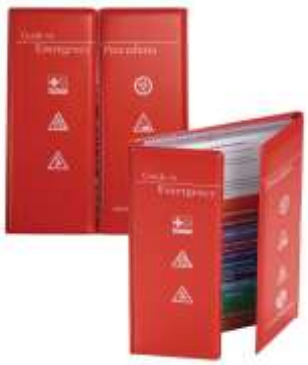
1.2 Site Policies and Procedures

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.

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.



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.

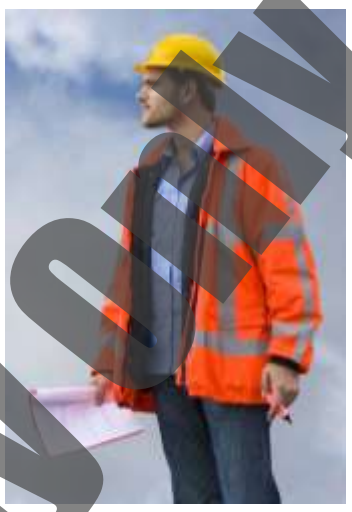
Review Questions

1.	List 3 things that may be included in 'operations documentation'.	☐
1. 2. 3.		

1.3 Work Instructions

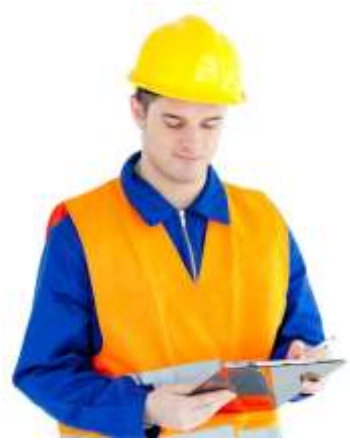
You need to be clear about what work you will be doing. Make sure you have everything about the job written down before you start. This includes what you will be doing, how you will be doing it and what equipment you will be using.

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 trees in the way? What are the ground conditions like? Are there sensitive environmental areas nearby?
- **The Weather** – Is there wind, rain or other bad weather? Is it too dark?
- **Facilities and Services** – Are there power lines or other overhead 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 power lines or other people?

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



- **The Task** – What area requires controlling? How long will the controls need to be in place? Do you require any special equipment?
- **Plant** – What type of plant will be used? How big is it? How much room does it need?
- **Equipment** – What equipment will you need to control the site water table? Is the equipment available?
- **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.

They can include:

- Project dimensions – the measurable requirements of the project including task size, deadlines and budgets.
- Project tolerances – the acceptable amount of variation from the project dimension.
- Standards of work – the minimum standard that the work must be completed to.
- Material standards – the minimum standards to which material properties must comply.

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.

Review Questions

2.	What are 4 details you will need to have about where you will be working?	☐

1.

2.

3.

4.

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

4.	What are 4 types of work instructions, plans or drawings that can help you make sure you are achieving the quality standards for the project?	☐

1.

2.

3.

4.

5.	Why should you learn about the conventions and symbols used in plans and drawings?	☐

1.4 Hazard Identification and Control

Before you start work, you need to check for any hazards or dangers in the area. If you find a hazard or danger you need to do something to control it. This will help to make the workplace safer.

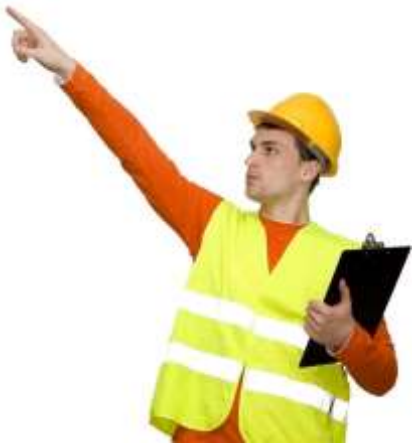
1.4.1 Identify Hazards

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

A **hazard** is the thing or situation with the potential to cause injury, harm or damage.

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.
- 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.
- Insufficient lighting.

1.4.2 Control Hazards

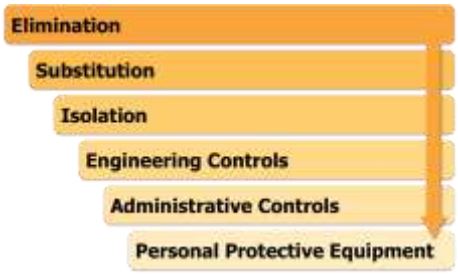
After you have found hazards or dangers you need to work out how bad they are:

- What is the chance that the hazard will hurt someone or cause damage?
- If it does happen, how bad will the injury or damage be?

Thinking about these things will help you to choose how to control the hazards. Hazards controls need to follow:

- Legislation (laws).
- Australian Standards.
- Codes of Practice.
- Manufacturers' specifications.
- Industry standards.

The best way to control hazards is to use the Hierarchy of Hazard Control. The Hierarchy of Hazard Control is the name given to a range of control methods used to eliminate or control hazards and risks in the workplace.



You start at the top of the list and see if you can take away (eliminate) the hazard or danger.

If you can't take it away you move down the list to see if you can swap it for something safer (substitution).

Keep working through the list until you find something that controls that hazard or danger.

This table shows you the 6 different types of controls in order from best to worst:

Hierarchy Level	Action
1. Elimination	Completely remove the hazard. This is the best kind of hazard control.
2. Substitution	Swap a dangerous work method or situation for one that is less dangerous.
3. Isolation	Isolate or restrict access to the hazard.
4. Engineering Controls	Use equipment to lower the risk level.
5. Administrative Controls	Site rules and policies attempt to control a hazard.
6. Personal Protective Equipment	The least effective control. Use PPE while you carry out your work.

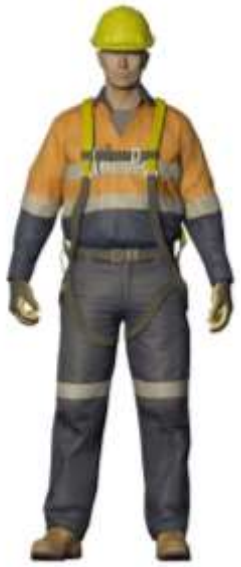
Hazard control measures need to be put in place before you start your work, or as soon as you see a hazard while you are doing your work. Hazard controls can sometimes be listed in your work instructions or you can ask your boss or supervisor for help.

Once a hazard control is in place you will need to check to make sure it is working well to control the hazard or danger.

Talk to your supervisor or safety officer if you are not sure if it is safe enough to carry out your work. If you think the hazard is still too dangerous you should not try to do the work.

1.4.2.1 Personal Protective Equipment

Personal Protective Equipment (PPE) is clothing and equipment designed to lower the chance of you being hurt on the job. It is required to enter most work sites.



It includes:

- Head protection – hard hats and helmets.
- Foot protection – non-slip work boots.
- Hand protection – gloves.
- Eye protection – goggles, visors or glasses.
- Ear protection – plugs or muffs.
- Breathing protection – masks or respirators.
- Hi-visibility clothing – clothing that makes you stand out and lets other people know where you are.
- Weather protection – clothing that protects you from the sun or from the cold.

Make sure any PPE you are wearing is in good condition, fits well and is right for the job.

If you find any PPE that is not in good condition, tag it and remove it from service. Then tell your supervisor about the problem and they will organise to repair or replace the PPE.

1.4.2.2 Site Signage Requirements

In some cases you may need to isolate the work area. Set up barricades and signage to warn others that you are working in the area and that it is dangerous for them to come too close.

Signage requirements will differ depending upon the location of the site. Highway signage requirements are different from rural roads or footpaths.

Sites that could require signage may include:

Site Type	Signage Requirement
Urban Environments	All require signage but the number of signs will vary with the level of congestion or use. Low traffic or rural areas can have fewer signs than a major road.
Off-Road and Un-Trafficked Areas	Require isolation signage and restricted access signs.
High-Use Areas	Parking sites, pedestrian areas and buildings – signage could vary depending on the location.
Open Trenches	Any areas of open trenches should be signed and isolated from the public.

To control the movement of traffic around and through the site there are 2 different types of traffic management plans:

Traffic Management Plan

Deals with traffic moving through the site, i.e. traffic on public roads and members of the public.

Vehicle Management Plan

Deals with on-site vehicle movements, haul circuits and dump runs, and material routes.

A Traffic Management Plan provides the details to safely manage traffic during the conduct of works on roads and normally includes:

- A traffic guidance scheme (diagrams).
- Worksite hazard assessment (such as a Work Method Statement).
- Details of the location, nature and duration of the works.

In the traffic or vehicle management plan, signs and the distances between signs will be listed. Reading the plans will show you where particular signs need to be placed.

Signs and barriers may include:

- Danger or warning signs like speed limits, 'workmen ahead' or 'reduce speed'.
- Flashing lights.
- Barricades, fences and cones.
- Guide signs.
- Arrow boards.
- Bollards.
- Portable traffic lights and signals.
- Hazard markers.

General awareness of the 'rules of the road' on site will help ensure a safe working environment for everyone.

1.4.3 Environmental Protection Requirements

Environmental protection requirements are part of every worksite. Make sure you check with your supervisor about what environmental issues need to be managed during your work.

The requirements are used on worksites to ensure the minimum possible effects on the immediate work environment such as plants, animals and resources. They also cover more immediate physical issues such as noise, dust and vibration.

All environmental details should be listed in an 'Environmental Management Plan' for the site. It can include details for:

- Waste management.
- Water quality protection.
- Noise control.
- Vibration control.
- Dust management.

The environmental management plan will outline the steps and processes needed to prevent or minimise damage to the environment through the use of machinery and equipment.

1.4.3.1 Waste Management

It is very important that water, air and land are protected from pollution sources. Steps must be taken to either protect the environment or restore it after work is done.

Waste and clean-up management procedures on site will include taking steps to use environmentally friendly materials (including recycled materials) and implementing methods of sorting waste into categories for recycling and correct disposal.

The environmental management plan will outline:

- Disposal of site waste materials and rubbish.
- Recycling waste materials.
- Re-use of waste materials.

1.4.3.2 Water Quality Protection Plan

This plan provides the steps that will be used to protect the water in adjacent areas. It will detail items like silt fences, diversion drains and sediment ponds.

This plan can have a sub-plan for any wetlands or low-lying areas if these will impact on the work zone.