

# WORK EFFECTIVELY AND SUSTAINABLY IN THE CONSTRUCTION INDUSTRY CERTIFICATE II IN BUILDING AND CONSTRUCTION (PATHWAY – TRADES) CPCCCM1012A

LEARNER'S GUIDE

BUILDING AND CONSTRUCTION



# Work effectively and sustainably in the construction industry

CPCCCM1012A

Learner's guide

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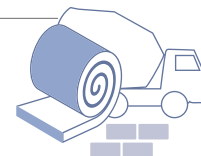
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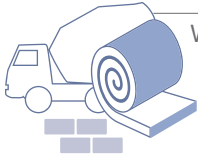
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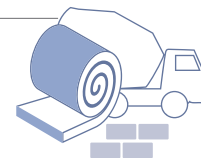


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# Welcome

Welcome to the learner's guide for CPCCCM1012A *Work effectively and sustainably in the construction industry*.

This guide will give you a basic understanding of the structure of the construction industry, the role expectations of workers, and sustainable use of materials and resources.

Areas of explanation include:

- the structure, scope and economic importance of the construction industry
- occupations, trades and employment opportunities
- working conditions, responsibilities and duties
- working effectively as an individual and as part of a team
- environmental issues and requirements for working sustainably in the construction industry.

## Qualification overview

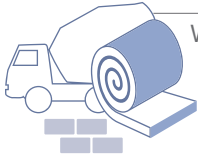
This unit of competency, CPCCCM1012A *Work effectively and sustainably in the construction industry*, forms part of Certificate II in Building and Construction (Pathway – Trades), a pre-vocational course for learners seeking to gain an apprenticeship in the building and construction industry. The focus of this course is on developing relevant technical, vocational and interpersonal competencies as well as skills, knowledge and experiences that may be transferable to other industry areas. You will also gain employability skills relevant to an entry level employee of the industry.

The first component of the course consists of seven core units of competency (common to 11 construction trades) and a period of work placement. This component, which would typically be delivered over a one-year period, is designed to provide you with a tradesperson's introduction to the building and construction industry.

In the second component of the course, typically undertaken in the second year of study, you will choose from 10 trade-specific streams of units of competency that enable you to focus your learning on a particular trade such as bricklaying, painting or carpentry.

To progress further in the industry, beyond this introductory level, you will then need to gain an apprenticeship in your chosen trades area, or pursue further training within the building and construction field.

**Note:** If you are completing this unit as part of a different qualification, your lecturer will give you the relevant information.

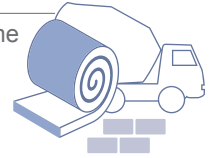


## Unit overview

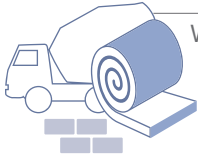
This unit describes the performance outcomes, skills and knowledge required to work effectively and sustainably in the construction industry.

Some basic information for this unit of competency is provided here. You can find the full unit details at Annex A at the back of this guide.

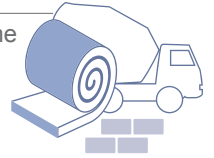
Unit title	Work effectively and sustainably in the construction industry
Descriptor	This unit of competency specifies the outcomes required to prepare for and sustain effective work within the construction industry. It covers the identification and clarification of the construction industry work context, scope and employment conditions, responsibility required to be accepted by the individual, working in a team, individual career path improvement activities and sustainable work practices and techniques.
National code	CPCCCM1012A
Employability skills	This unit contains employability skills.
Prerequisite units	Nil
Application	This unit of competency supports the attainment of basic understanding of the structure, culture and role expectations of workers within the construction industry and sustainable use of materials and resources.



Element 1 Identify industry structure, occupations, job roles and work conditions	
1.1	Scope and nature of the construction industry and its national economic importance are recognised.
1.2	<b>Construction job roles</b> , occupations and trade callings of the construction industry are identified and related to direct and indirect employment opportunities.
1.3	Trends in technology, work processes and environmental issues which are likely to impact on the construction industry are identified and evaluated in terms of employment options.
1.4	Construction employment conditions, organisational requirements, responsibilities and duties are identified and related to jobs and career paths.
1.5	Safe work methods and practices are identified to meet Australian government and state and territory OHS legislative requirements.
Element 2 Accept responsibility for own workload	
2.1	Work activities are planned and priorities and deadlines are established with <b>work group members</b> such as supervisors and communicated to others whose own work plans and timelines may be affected.
2.2	Work is completed against the plan and to the standard expected in the workplace and in accordance with any guidelines, directions and specifications provided by supervisors, including use of <b>personal protective equipment</b> .
2.3	Variations and difficulties affecting performance or <b>quality requirements</b> of own work are identified and these issues reported to appropriate personnel using appropriate communication techniques and accessing relevant <b>information</b> .
2.4	Additional support needed to achieve or improve work outcomes or quality is communicated clearly to the appropriate personnel.
Element 3 Work in a team	
3.1	Site goals and the contributions to be made by <b>teams</b> in a construction activity are identified and understood.
3.2	Individual contributions to team activities are identified and confirmed with others in the team.
3.3	Assistance and encouragement are provided to other team members wishing to meet or enhance their role and the role of the team.
3.4	Team improvements are initiated where possible and/or encouraged from other team members.
3.5	Causes of disharmony and other barriers to achievement are referred to the appropriate party for resolution.



Element 4 Identify own development needs	
4.1	Skills and knowledge necessary to work effectively in the construction industry are identified.
4.2	Steps are taken, in consultation with appropriate personnel, to identify own <b>learning needs</b> for future work requirements.
4.3	Appropriate opportunities to learn and develop required skills and knowledge for future construction industry work opportunities are identified and evaluated.
Element 5 Identify current resource use and identify opportunities to improve resource efficiency	
5.1	Work site <b>environmental and resource efficiency issues</b> and resources used in own work role are identified and recorded using <b>appropriate techniques</b> .
5.2	Work site <b>environmental hazards</b> relating to the use of resources are identified and reported to designated personnel.
5.3	Enterprise plans to improve environmental practices, <b>environmental requirements</b> and resource efficiency are followed.
5.4	<b>Suggestions</b> are made for improvements to work site practices in own work area.
Element 6 Comply with environmental regulations	
6.1	Procedures are followed to ensure compliance with environmental requirements.
6.2	Breaches or potential breaches are reported to <b>designated personnel</b> .



## Skills recognition and recognition of prior learning (RPL)

You are encouraged to discuss with your lecturer any previous courses or work experience in which you have participated so that it can be recognised. Evidence must be provided.

## Resources

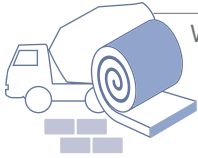
No specific resources are required for this unit.

## Required

You will need to provide the following:

- an A4 notepad
- an A4 file for notes, handouts and printed documents
- pens, pencils, eraser and highlighters.

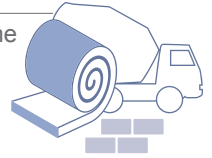




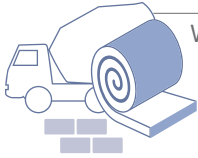
## Self-checklist

As you work through this guide you should return to this checklist and record your progress. Where you understand something and think that you can perform it 'easily', congratulations. Where your response is 'with help' – revise the material in that section and/or discuss with your lecturer or other learners in your group.

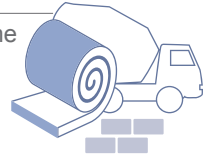
CPCCCM1012A Work effectively and sustainably in the construction industry		I understand	
Element 1 Identify industry structure, occupations, job roles and work conditions		Easily	With help
1.1 Scope and nature of the construction industry and its national economic importance are recognised.			
1.2 <b>Construction job roles</b> , occupations and trade callings of the construction industry are identified and related to direct and indirect employment opportunities.			
1.3 Trends in technology, work processes and environmental issues which are likely to impact on the construction industry are identified and evaluated in terms of employment options.			
1.4 Construction employment conditions, organisational requirements, responsibilities and duties are identified and related to jobs and career paths.			
1.5 Safe work methods and practices are identified to meet Australian government and state and territory OHS legislative requirements.			



Element 2 Accept responsibility for own workload	Easily	With help
2.1 Work activities are planned and priorities and deadlines are established with <b>work group members</b> such as supervisors and communicated to others whose own work plans and timelines may be affected.		
2.2 Work is completed against the plan and to the standard expected in the workplace and in accordance with any guidelines, directions and specifications provided by supervisors, including use of <b>personal protective equipment</b> .		
2.3 Variations and difficulties affecting performance or <b>quality requirements</b> of own work are identified and these issues reported to appropriate personnel using appropriate communication techniques and accessing relevant <b>information</b> .		
2.4 Additional support needed to achieve or improve work outcomes or quality is communicated clearly to the appropriate personnel.		
Element 3 Work in a team	Easily	With help
3.1 Site goals and the contributions to be made by <b>teams</b> in a construction activity are identified and understood.		
3.2 Individual contributions to team activities are identified and confirmed with others in the team.		
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3.4 Team improvements are initiated where possible and/or encouraged from other team members.		
3.5 Causes of disharmony and other barriers to achievement are referred to the appropriate party for resolution.		



Element 4 Identify own development needs	Easily	With help
4.1 Skills and knowledge necessary to work effectively in the construction industry are identified.		
4.2 Steps are taken, in consultation with appropriate personnel, to identify own <b>learning needs</b> for future work requirements.		
4.3 Appropriate opportunities to learn and develop required skills and knowledge for future construction industry work opportunities are identified and evaluated.		
Element 5 Identify current resource use and identify opportunities to improve resource efficiency	Easily	With help
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5.2 Work site <b>environmental hazards</b> relating to the use of resources are identified and reported to designated personnel.		
5.3 Enterprise plans to improve environmental practices, <b>environmental requirements</b> and resource efficiency are followed.		
5.4 <b>Suggestions</b> are made for improvements to work site practices in own work area.		
Element 6 Comply with environmental regulations	Easily	With help
6.1 Procedures are followed to ensure compliance with environmental requirements.		
6.2 Breaches or potential breaches are reported to <b>designated personnel</b> .		



## About the icons

Note that not all icons may appear in this guide.



### Performance criteria

This icon indicates the performance criteria covered in a section. The performance criteria contribute to the elements of competency that you must demonstrate in your assessment.



### Activity

This icon indicates that there is an activity for you to do.



### Group activity

This icon indicates that there is an activity for you to do with a partner or in a group.



### Discussion

This icon indicates that there will be a discussion, which could be with a partner, a group or the whole class.



### Research

This icon indicates that you are to do a research activity using the internet, texts, journals or other relevant sources to find out about something.



### Case study

This icon indicates that there is a case study or scenario to read.



### Think

This icon indicates that you should stop and think for a moment about the point being made or the question being asked.

You will also see the following characters used throughout this guide, where there's a case study or activity that's specific to a particular trade.



**Dave**  
A bricklayer



**Emma**  
A painter



**Liam**  
A tiler



**Katherine**  
A carpenter



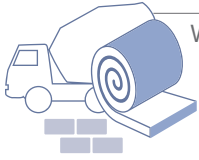
**Jim**  
A supervisor

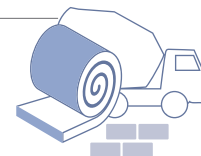


**Christine**  
An apprentice



**Jeremy**  
An apprentice





# Section 1 – Overview of the construction industry

## Introduction

The construction industry impacts on the lives of every Australian. It provides us with the homes we live in, recreational facilities, schools, hospitals and infrastructure for transport, water, electricity and telecommunications. It's an integral part of the Australian economy and is closely linked to other industries such as manufacturing and finance.



### Performance criteria

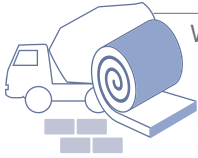
- 1.1 Scope and nature of the construction industry and its national economic importance are recognised.
- 1.2 **Construction job roles**, occupations and trade callings of the construction industry are identified and related to direct and indirect employment opportunities.
- 1.3 Trends in technology, work processes and environmental issues which are likely to impact on the construction industry are identified and evaluated in terms of employment options.

## Scope of the construction industry

To gain a better understanding of the size and nature of the construction industry, we need to consider the main factors that affect it, such as:

- the number of people employed in the industry
- the amount of money involved
- the various sectors within the construction industry
- the types of occupations covered by the industry.

The Australian Bureau of Statistics, Commonwealth, state and territory government departments and major industry associations gather information about these factors to identify trends and make predictions about the future of the industry.



## Activity 1.1 Employment profile

Go to the Australian Government Department of Employment's web page at [www.employment.gov.au](http://www.employment.gov.au).

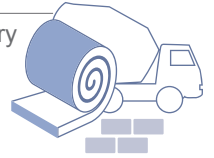
Search for *Australian Jobs* publications and open the latest version.

Locate the information on the construction industry.

Using the information from this publication and with guidance from your lecturer, fill in the spaces below.

Employment numbers	_____
% of national employment	_____
Projected employment numbers	_____
Top five occupations	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
% of workers employed as technicians or trade workers	_____





## Economic importance

The construction industry generally, and the residential building sector specifically, is one of the larger employment areas contributing to the Australian economy. Billions of dollars are spent annually on projects across the country, creating jobs for a very large part of the Australian workforce.

The effect this has on how governments at all levels plan for the future cannot be underestimated, as it can influence government decisions on such issues as interest rates, the provision of land, transport systems, the provision and location of schools, hospitals and so on, to the point where planning has to be thought out many years in advance.

Your future is affected by these decisions. By becoming part of the industry, you can contribute to the outcomes which enhance our future economy.



### Activity 1.2 Economic importance

The construction industry has an effect on many other aspects of the country's economy including, for example, imports and exports, mining and resource development, manufacturing and retail.

With your class, discuss how the construction industry contributes to the economy. List five examples below.

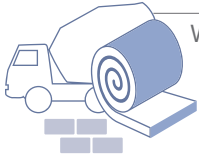
1.

2.

3.

4.

5.



## Industry sectors

There are three main sectors in the construction industry.



### The residential sector

This sector constructs residential buildings including single houses and multiple dwellings such as duplexes, villa units and low-rise residential flats.



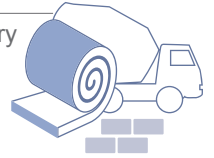
### The commercial sector

This sector constructs large multistorey office buildings, multistorey hotels, hospitals, schools, casinos, resorts and large shopping centres.



### The industrial sector

This sector constructs factories of all sizes and for all purposes, service stations, warehouses, bus and train depots and stations.



## Careers, occupations and trades

Careers and occupations in the construction industry can be broadly broken down into four categories:

- unskilled or semi-skilled labourers, eg brickies' labourers and concrete labourers
- qualified and/or certified tradespeople, eg bricklayers, plumbers, electricians, painters
- paraprofessionals, eg estimators, schedulers
- professionals, eg architects, building designers, builders, building surveyors, quantity surveyors, project managers.

As you've seen from your research, over half the workers employed in the construction industry are qualified or certified technicians and tradespeople.

There are a variety of different trades required in all sectors of the construction industry. Some of these trades are listed here.



Bricklaying/blocklaying



Carpentry and joinery



Concreting



Painting and decorating



Plastering



Roof tiling



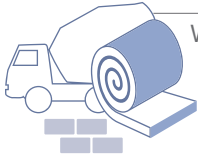
Sign-writing



Wall and ceiling lining



Wall and floor tiling



### Activity 1.3 Your career plans

Answer the following questions about your career plans.

What made you decide to get into the construction industry?

---

---

---

What trade(s) are you most interested in?

---

---

---

Do you know the names of the course(s) of study you might need to pursue?

---

---

---

Where do you see yourself working in five years' time and in ten years' time?

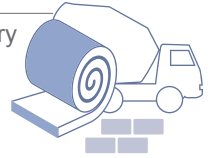
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## Employment opportunities

The predictions for growth in the Australian construction industry are very strong and this means that there are more opportunities for employment as a tradesperson. However, the demand for workers in different trades varies over time and this affects the number of jobs available in a particular trade area.



### Activity 1.4 Employment opportunities: part 1

Go to the Australian Government Job Outlook web page at <<http://joboutlook.gov.au>>.

Use the alphabetical search to locate your preferred trade.

With guidance from your lecturer, fill in the spaces below.

Trade name: \_\_\_\_\_

Description:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Average weekly hours: \_\_\_\_\_

Average weekly earnings (before tax): \_\_\_\_\_

How many workers are employed in this trade?

\_\_\_\_\_

What will be the likely future employment growth for the next five years?

\_\_\_\_\_



### Activity 1.5 Employment opportunities: part 2

Compare your answers from Activity 1.4 with classmates who chose a different trade. Discuss the differences in descriptions, conditions and employment.

Would you consider following a different pathway? Why or why not? Make notes below.

\_\_\_\_\_

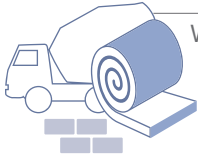
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Every week in newspapers and on websites dedicated to careers and employment, many jobs are advertised for the construction industry. The descriptions used by employers can vary from state to state and territory to territory, as can the roles employers expect a prospective employee to undertake.



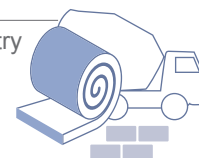
Salaries can vary widely too. The requirement for certain qualifications is not always consistent and the level of experience is determined by the project work undertaken by the company. This can make it very confusing for someone just starting out on their career path.



### Activity 1.6 Examples of job advertisements

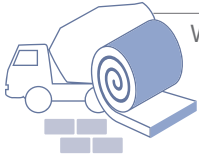
With guidance from your lecturer, use the internet and newspapers to find examples of job advertisements for the following trades. Make notes about the jobs you find.

Job title	Brief job description, salary, requirements, etc
Bricklayer/blocklayer	<hr/> <hr/> <hr/> <hr/>
Carpenter/joiner	<hr/> <hr/> <hr/> <hr/>
Concreter	<hr/> <hr/> <hr/> <hr/>



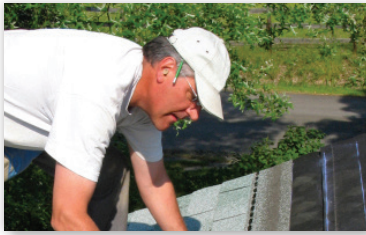
Painter and decorator	<hr/> <hr/> <hr/> <hr/>
Plasterer	<hr/> <hr/> <hr/> <hr/>
Roof tiler	<hr/> <hr/> <hr/> <hr/>
Sign-writer	<hr/> <hr/> <hr/> <hr/>
Wall and ceiling liner	<hr/> <hr/> <hr/> <hr/>
Wall and floor tiler	<hr/> <hr/> <hr/> <hr/>





## Current trends in the construction industry

Technology and improvements to work processes have always had a major impact on the construction industry. For example, in the early 19th century new technology allowed bricks to be made quickly and cheaply by machines instead of by hand and suddenly many more brick buildings were being constructed. This had an obvious effect on the skills tradespeople needed and the type and amount of employment available.



The construction industry is changing every day. Environmental issues now have a major influence on the resources used when building are being constructed and on the construction process itself. You need to know the current industry trends when you choose a career path so that you get the right skills and qualifications. Keeping up with changes in technology and work practices will be important throughout your career because it will affect your ability to find ongoing employment.



### Activity 1.7 Current trends

Use the internet to identify some of the current trends in building and construction that might affect your chosen trade or future employment opportunities. Find an example of new technology, work processes and environmental issues then answer the questions that follow.

#### Technology

What is the trend?

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How does this trend affect the construction industry?

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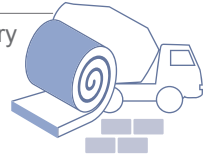
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How does it affect your career choice and employment opportunities?

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### Work processes

What is the trend?

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How does this trend affect the construction industry?

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How does it affect your career choice and employment opportunities?

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### Environmental issues

What is the trend?

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How does this trend affect the construction industry?

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How does it affect your career choice and employment opportunities?

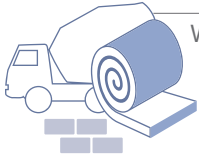
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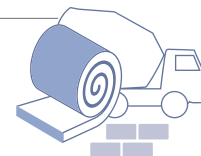


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## Section 2 – Working in the construction industry

### Introduction

As an employee (worker) in the construction industry, you'll work for an employer who pays your wages.

Employers can be building companies, contractors who run building projects for companies and private clients, and subcontractors who provide specialised services like bricklaying, carpentry and tiling.

Different employers have different expectations and provide a variety of working conditions.



In this section, you'll find information about working in the construction industry including:

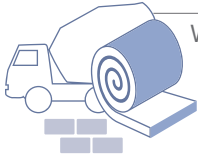
- employment conditions
- employers' requirements and responsibilities
- employees' duties and responsibilities
- work health and safety (WHS) requirements.

Understanding these conditions and requirements can help you to choose the areas of the industry that suit you best.



### Performance criteria

- 1.4 Construction employment conditions, organisational requirements, responsibilities and duties are identified and related to jobs and career paths.
- 1.5 Safe work methods and practices are identified to meet Australian government and state and territory OHS legislative requirements.



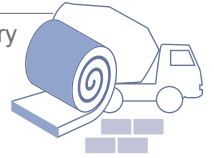
## Employment conditions

Employment conditions are the specific requirements and restrictions that apply to your job. They include issues such as wages, working hours, leave entitlements, superannuation, training opportunities and WHS.

In the construction industry, employment conditions vary between trades, organisations and worksites. The following are the three major methods for establishing employment conditions:

- **industrial awards** – laws that establish the minimum conditions for all employees who work in the same industry, occupation or trade
- **enterprise agreements** – sets of employment conditions that are negotiated and agreed on by an employer and a group of employees, which usually apply to all employees in a single organisation or workplace
- **workplace agreements** – negotiated and agreed on by an employer and an individual employee. An employer can't offer less than the minimum conditions set by industrial awards; however, workplace agreements may offer additional benefits.





## Activity 2.1 Industrial awards

Go to the Australian Government Fair Work Ombudsman web page at <[www.fairwork.gov.au](http://www.fairwork.gov.au)>.

Go to 'Award Finder' under 'Awards'.

Locate an award for building and construction in your state or territory.

Using the information in the Award document, fill in the spaces below with guidance from your lecturer.

**Name of award:**

List five employment conditions that are covered by the award.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Which of these conditions would influence you when choosing a trade or career path? Why?

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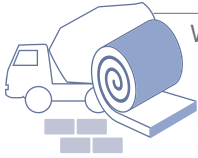
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## Activity 2.2 Employment conditions

Discuss the methods of establishing employment conditions with your class. Consider the advantages and disadvantages of each. Make notes below.

### Industrial award

Advantages

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Disadvantages

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### Enterprise agreement

Advantages

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Disadvantages

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### Workplace agreement

Advantages

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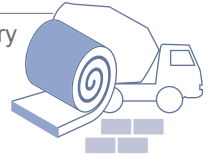
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Disadvantages

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There are federal, state and territory laws that protect the rights of all employers and employees including the following:

- *Fair Work Act 2009*
- *Fair Work Regulations 2009*
- *Fair Work (Building Industry) Act 2012*
- *Independent Contractors Act 2006*
- *Work Health and Safety Act 2011.*



Codes of practice are developed by legislators, industry regulators and individual organisations as guides for workers in the construction industry. While codes of practice are not laws, they provide practical and specific directions for issues such as workplace relations, ethical standards, work practices, training and WHS requirements.

The Australian Government Fair Work Building and Construction (FWBC) is the federal workplace regulator, established in 2012 to enforce workplace laws and to deal with problems in the construction industry.

## Employers' requirements and responsibilities

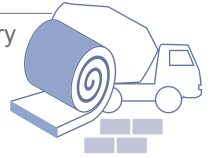
Every organisation, employer or worksite has policies that govern employment opportunities, working conditions, work processes and outcomes. These policies are developed to ensure that all laws and Regulations are followed and that business and performance plans are achieved.

When you work in the construction industry, whether it's for a large building company or an individual tradesperson, you'll be affected by your employer's:

- goals and objectives – what they plan to achieve in the short and long term
- systems and processes – how they prefer tasks to be completed
- quality standards – the preferred condition, reliability and safety of products and services
- ethical standards – the behaviour that ensures fairness and respect to workers, clients and the public.

[illegible]

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### Activity 2.4 Workplace discrimination

Use the internet to find examples of anti-discrimination legislation. Write the full names of the Acts below.

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With a partner or group, discuss the actions that employers can take to avoid discrimination in the workplace. List some examples below.

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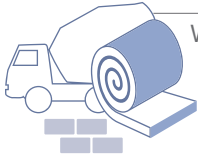
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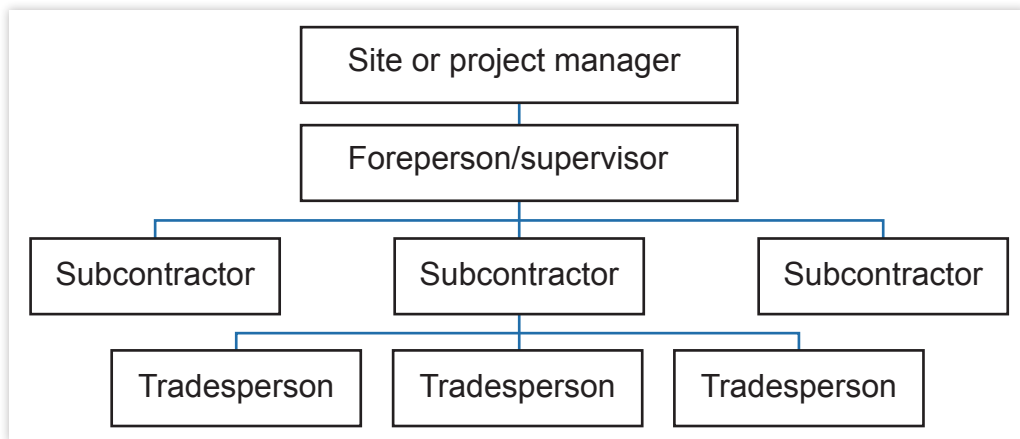
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## Employees' duties and responsibilities

Depending on the size of a construction project, a number of people will be involved at different levels with different responsibilities and duties. This diagram shows an example of the organisational structure on a construction site.



While the exact roles and responsibilities of project managers, forepersons and subcontractors often vary from one building organisation to another, the following are some examples of common tasks performed on a worksite.



Site or project manager

Has overall control of the site including:

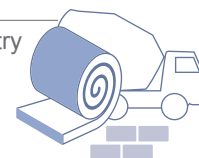
- planning the sequence of on-site tasks
- timetabling the start time of tasks
- meeting with architects, engineers and subcontractors to discuss and solve problems
- reporting regularly to company management or the client.



Foreperson/supervisor

Organises the day-to-day running of the site including:

- ensuring materials and plant are available
- setting the production to be achieved
- setting the quality standards according to the plans and specifications
- supervising and controlling safe working conditions on the site
- reporting regularly to the site/project manager.



### Subcontractor

Sees that the daily workload is achieved including:

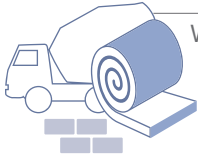
- allocating enough tradespeople to complete the task safely
- ensuring materials and plant are available for tradespeople
- cooperating with other subcontractors
- supervising the quality of tradespeople's work
- attending subcontractors' site meetings.



### Tradesperson

Performs general construction tasks including:

- completing work within the time given
- producing quality work in accordance with instructions
- working in a safe manner
- using materials without excessive waste
- taking care of work done by others.



## Activity 2.5 Workplace conduct

Discuss with your class what it means to be accountable for your actions and how the way you behave in the workplace affects your employer and your workmates. Answer the following questions below.

What is a 'code of conduct'?

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What might be included on a code of conduct on a construction site?

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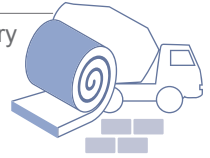
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No matter what trade you're in or the position you hold, every worker has responsibilities to their employer, clients, other workers and the public. Most organisations have policies about what you have to do and how to do it and you will usually have to report to a supervisor and be accountable for your actions and work output.



## Working safely

You would have already completed (or are currently enrolled in) the unit CPCCOHS2001A *Apply OHS requirements, policies and procedures in the construction industry*, which covers working safely in detail. We will look at it only briefly here.

Work health and safety (WHS) is a legal requirement that is covered by legislation (laws) created by federal, state and territory governments.

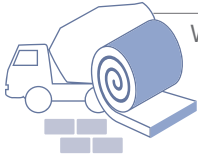


Employers are required to provide a safe and healthy work environment and you must be aware of safe work methods and use them in your role on a worksite.

Some of your responsibilities are to:

- follow WHS policies and procedures and comply with site safety plans
- use any personal protective equipment (PPE) supplied by your employer
- use plant and equipment responsibly and safely
- know the emergency procedures for your worksite and how to use safety equipment
- report incidents and potential hazards to your employer
- contribute to keeping the worksite clean and tidy
- take responsibility for your health and wellbeing and that of others by, for example:
  - not using drugs or alcohol at work
  - preventing bullying and harassment
  - smoking in designated areas.

Australian WHS legislation encourages the participation of employers and employees in the promotion of WHS issues. Both parties are encouraged to exchange information about risks to health and safety and put measures in place to eliminate or reduce any risks. A work health and safety committee may be set up to regularly review WHS matters and issues.



## Activity 2.6 Working safely

Answer the following questions about safety in the workplace. If you're unsure, discuss the issues with your classmates or lecturer.

What is the name of the legislation that covers WHS in your state or territory?

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What is 'white card' training?

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What is duty of care?

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What is a safe work method statement (SWMS)?

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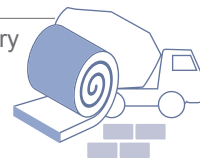
What is a job safety analysis (JSA)?

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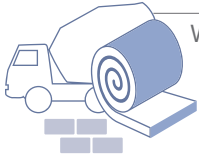
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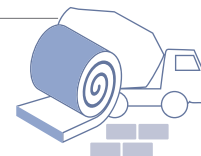




List five examples of PPE you might be required to use on a construction site.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_





## Section 3 – Working effectively

### Introduction

Once you begin your career in the construction industry, you'll need to make sure you carry out tasks efficiently and effectively.

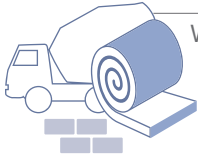
In this section you'll find information about:

- planning and prioritising your work tasks
- following instructions and working to plan
- dealing with changes and unexpected problems
- getting support when you need it.



### Performance criteria

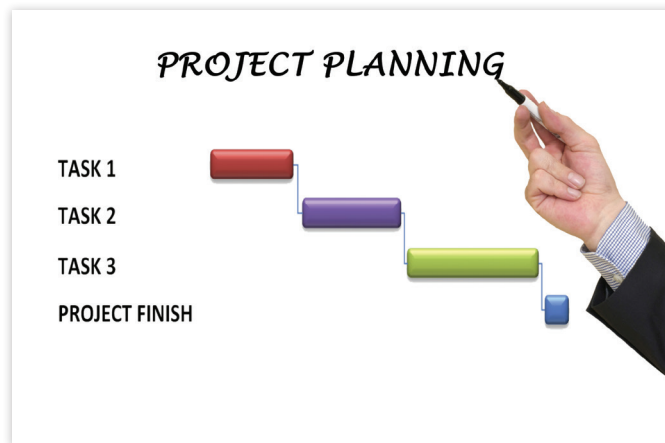
- 2.1 Work activities are planned and priorities and deadlines are established with **work group members** such as supervisors and communicated to others whose own work plans and timelines may be affected.
- 2.2 Work is completed against the plan and to the standard expected in the workplace and in accordance with any guidelines, directions and specifications provided by supervisors, including use of **personal protective equipment**.
- 2.3 Variations and difficulties affecting performance or **quality requirements** of own work are identified and these issues reported to appropriate personnel using appropriate communication techniques and accessing relevant **information**.
- 2.4 Additional support needed to achieve or improve work outcomes or quality is communicated clearly to the appropriate personnel.



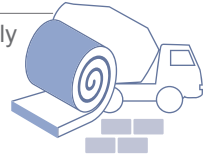
## Planning work

Planning tasks before you begin a new activity is essential because it helps you to work out what's to be done, how you're going to do it and what you'll need. Planning also lets you identify who else is involved and how others will be affected by your activities.

The builder or project manager of a construction project must plan all work tasks and consider the contribution of every worker to select the best and safest way of completing the project on time, within budget, and according to the required standards.



For a tradesperson in the construction industry, planning may consist of deciding on the steps required to complete a task set by a supervisor, organising the materials, tools and equipment, and communicating with others in the team to get a task done.



### Activity 3.1 Planning a task: part 1 – Listing the steps

Because the tiling team is low on materials, Liam asks Christine to go to the hardware store to pick up supplies. The team will have to stop work until they get what they need, so Christine understands that the task is urgent and she can't afford to make any mistakes.

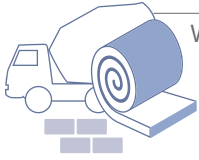
Think about the following questions.

- How can she find out what materials are needed?
- How will she get to the hardware store?
- Will she have to pay for the materials?
- What should she do when she gets back to the site?



Make a plan for Christine to complete this task, by listing the steps she should take.

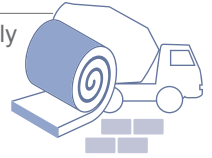
Number	Step



### Activity 3.1 Planning a task: part 2 – Communication

Read through your steps and make a list of the people Christine will have to communicate with and why.

Who	Why
	<hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/>



## Prioritising

Prioritising is deciding on the order in which to do your work tasks by identifying what's important or urgent and what can be postponed. The priority of construction tasks will depend on how it affects:

- your ability to complete another task
- the ability of others to complete their tasks
- when other workers need to be on site
- the overall project plan
- site safety.



Some tasks, like phone calls and meetings, can seem urgent because they demand your immediate attention but part of good planning and working efficiently is identifying what's important, what can wait and what is just wasting time.

Prioritising helps you to make the best use of your time and makes sure that the tasks that affect others are completed when necessary to avoid delays.



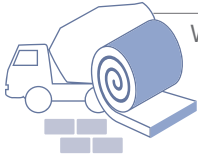
### Activity 3.2 Prioritising

Katherine will be installing timber skirting inside a residential home tomorrow and she has given Jeremy a list of jobs for the day.

Organise the list of Jeremy's tasks from highest to lowest priority by numbering them 1–10 in the left-hand column.



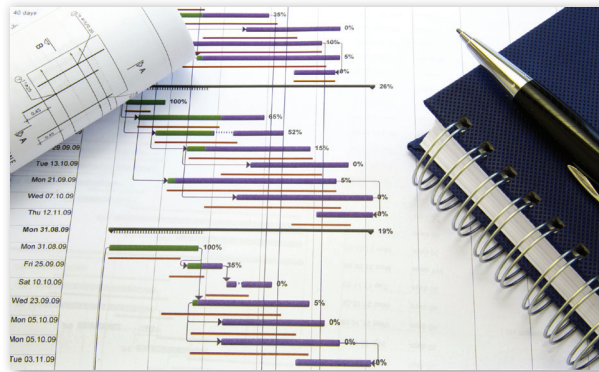
	Cut five lengths of skirting board.
	Put in request for annual leave.
	Buy three tubes of liquid nails.
	Pack up tools and equipment.
	Clean and sweep up debris.
	Put on PPE.
	Buy lunch.
	Make sure the work truck is on site before Katherine arrives.
	Take measurements.
	Find lost screwdriver.



Priorities can change as a project progresses or when something unexpected occurs. For example, if Katherine and Jeremy were told that the electrician was arriving and the site must be cleared as soon as possible, cleaning the house and packing up all tools and equipment would become the highest priorities.

## Schedules and deadlines

Schedules are organised sequences of activities with a timeline indicating when tasks start and finish and when certain actions or events (like the delivery of materials) will occur. Schedules are essential on construction projects because there are many different workers involved on different tasks that must be completed in order and within a set timeframe.

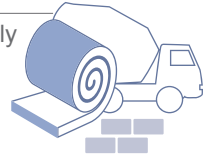


A deadline is the latest possible time by which a task or project must be completed. They are put in place to allow:

- other work to begin
- materials and equipment to be delivered when required
- pays to be finalised
- completed projects to be handed over to clients.

For tradespeople, deadlines need to be set in order to complete one job and move on to the next, without holding up or slowing down the timeline set by the builder, supervisor or client.





## Working to plan

The work plan on a construction project is a bit like a map telling you where the project is going, how to get there and what time to arrive. It's usually created by the project manager or contractor and it provides the information everyone needs to make sure they're working efficiently and effectively toward a common goal.

'Working to plan' means following the map by completing tasks within the expected timeframe, and using the materials, tools and equipment available to produce the agreed outcome.



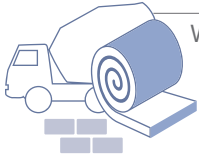
### Activity 3.3 Working to plan

In a group, discuss why it is essential that everyone working on a construction project follows the work plan. List five reasons identified by your group.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

The project manager or contractor allocates tasks to teams and individual tradespeople. You will usually get instructions from your employer or supervisor for most of the work you do when you first start out on a construction site. You have to be clear about what's expected so you'll need to:

- listen carefully
- ask as many questions as you need to
- read and understand any documentation you're given
- confirm your understanding
- ask for help when you need it
- follow safety procedures at all times.



The following are some of the ways you might receive work instructions.



Face-to-face



Team meetings



Mobile phone



Email



Two-way radio



Hand signals



Bulletin or memo



Signs



Drawings and specifications



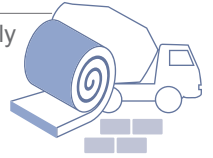
## Case study – Following instructions



Emma and Jeremy are about to start painting the outside of a small office building. Emma has given Jeremy these verbal instructions.

‘We need to start painting by 11 o’clock so I want you to get everything set up. We’ll need to move the boxes leaning against the wall and get rid of that pile of broken bricks. Don’t forget to sweep the concrete before you spread out the drop sheets. The paint is in the truck, so grab what we need for the front wall.’





### Activity 3.4 Following instructions

Answer the following questions about the instructions Jeremy received.

List the tasks he has to do.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

What is Jeremy's deadline?

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What PPE will he need?

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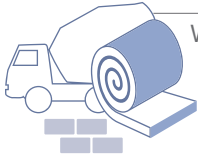
What further information might Jeremy need to complete these tasks? How will he find out what he needs to know?

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## Quality requirements

Quality requirements are the standards of work and customer service expected from both organisations and individual tradespeople. In the construction industry there are quality requirements for materials, building methods and safety.

Some quality requirements are legal obligations and some are established by organisations to make sure that the quality of their service or the products they deliver has a positive effect on their reputation and ability to attract future business.



### Activity 3.5 Quality requirements

Describe these sources of information about quality requirements in your own words below. Use the internet for research if you are unsure.

Building Code of Australia (BCA)

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Australian Standards®

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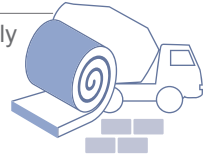
Manufacturer's specifications

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Company policies

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Workplace procedures

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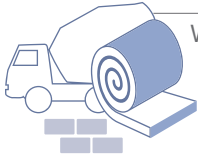
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## Variations and difficulties

No matter how well planned a project or task is, changes, problems and delays will occur and these circumstances will affect your ability to complete your tasks effectively.

Being flexible in your thinking and work practices will help overcome some problems but you may have to find extra information and report the issue to the appropriate people like your supervisor, manufacturers, suppliers, clients and other tradespeople.

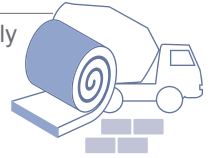




### Activity 3.6 Dealing with variations and difficulties

In a group, discuss the following problems that are commonly experienced on construction projects. Where would you find information about the issue and who would you need to inform? Make notes below. An example has been done for you.

Issue	Information	Report to
Unsafe conditions	<u>Company policies</u> <u>WHS legislation</u> <u>Safety data sheets</u> _____	<u>Supervisor</u> <u>Site safety officer</u> <u>WHS committee</u> <u>Workmates</u>
Tasks taking longer than expected	_____ _____ _____	_____ _____ _____
Equipment breakdown	_____ _____ _____	_____ _____ _____
Not enough material to complete task	_____ _____ _____	_____ _____ _____
Materials not delivered	_____ _____ _____	_____ _____ _____
Damaged materials	_____ _____ _____	_____ _____ _____



Faulty tools	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Mistakes made by another team	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Delay due to bad weather	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>

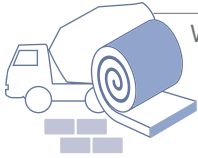
## Additional support

Sometimes, particularly when you're starting out in the construction industry, you'll need help completing your work tasks. You may need to:

- complete a task that you haven't done before
- use unfamiliar materials
- use unfamiliar tools or equipment
- learn new work processes.

Rather than being nervous or embarrassed about asking for help, you should see these situations as an opportunity to learn and to show your employer, supervisor or team mates that you're enthusiastic and committed to doing the best job possible and providing high-quality results.





### Activity 3.7 Getting help

What could happen if you don't ask for help when you need it? Discuss with your class and make notes below.

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How can you get help? Who could you talk to? Make a list of sources of information and the people who can help you.

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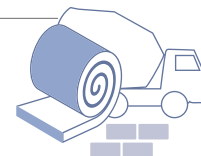
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## Section 4 – Working in a team

### Introduction

A team is any group of people working together towards a common goal. In the construction industry, most work is completed by teams of tradespeople.

Construction or trade teams are usually made up of workers with a variety of skills and experience which contribute to faster and more efficient completion of work activities.



Being able to work in a team is one of the most important skills you can develop for finding employment and working in the construction industry.

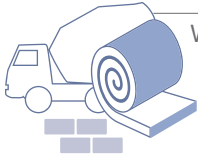
This section contains information on:

- the role of trade teams on construction projects
- the role of individuals in a trade team
- working with others
- helping and encouraging team mates
- improving a team
- barriers to good teamwork.



### Performance criteria

- 3.1. Site goals and the contributions to be made by **teams** in a construction activity are identified and understood.
- 3.2. Individual contributions to team activities are identified and confirmed with others in the team.
- 3.3. Assistance and encouragement are provided to other team members wishing to meet or enhance their role and the role of the team.
- 3.4. Team improvements are initiated where possible and/or encouraged from other team members.
- 3.5. Causes of disharmony and other barriers to achievement are referred to the appropriate party for resolution.



## Construction teams

Each construction project starts with a goal – usually the erection of a building or facility. This is the purpose of the project and the outcome that everyone involved is working to achieve. Because construction projects are often large and complicated, the overall goal is broken down into activities that are completed by teams of tradespeople with specialised skills such as bricklayers, carpenters and tilers.



A trade team can consist of many workers, depending on the size of the company, worksite or project, although a small team may consist of a single tradesperson with an apprentice.

Each trade team contributes to achieving the site goal. For example, the tasks completed by trade teams when building a brick and tile house include the following.



### Earthworkers

- prepare, fill, level and compact the site.



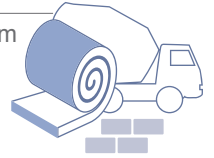
### Concreters

- set out
- set up formwork
- dig and pour footings
- prepare concrete slabs.



### Plumbers

- pre-lay drainage, water and gas supply
- install pipes later
- do the final fix of taps, toilets and gas appliances.



**Electricians**

- pre-lay electrical and communication cables
- install wiring, lights, outlets and appliances later.



**Carpenters**

- set out and lay floors
- set out and build walls.



**Bricklayers**

- set out and build retaining walls and walls
- install door and window frames.



**Roof carpenters**

- construct roof frames.



**Roof tilers**

- set out and install sarking and battens
- install tiles.



**Plasterers**

- float and set internal walls
- render or apply final texture coat to external walls.



**Wall and ceiling fixers**

- install plasterboard sheets, cornices, framed metal bulkheads and flush joint sheets.



**Glaziers**

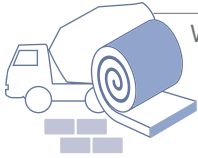
- install all glass into frames.



**Fixing carpenters**

- hang doors
- fit shelving, skirting and architraves.





**Cabinet makers**

- make and install cabinets.



**Wall and floor tilers**

- lay tiles to walls, floors and splashbacks.



**Painters**

- paint all walls, ceilings, doors and frames, inside and out.

Trade teams come and go throughout the construction process. A bricklaying team, for example, might build retaining walls and then return to build the house walls after the plumbers have installed the drainage pipes and the concreters have poured the concrete slab.

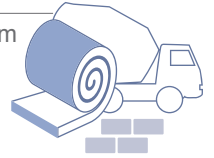
A project manager or supervisor oversees the entire project or site, and coordinates the activities and schedules of all trade teams. Members of each trade team attend regular site meetings to discuss the progress of the work activities and any issues or problems that arise during construction.



### Activity 4.1 Team meetings

With a partner or small group, discuss the issues that might be discussed at a weekly site meeting. List five issues below.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



## Individual contributions

Individuals in a team are usually assigned specific roles so that the work can be carried out more efficiently. All team members have different skills and strengths, and a team is most effective when everyone is doing what they do best.

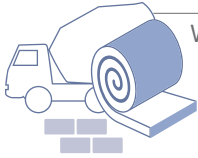
The tasks performed by individuals within a trade team depend on:

- their skills and experience, eg an apprentice might be restricted to simple tasks while they're learning new skills and gaining experience
- the size of the team, eg in a large team, roles may be very specific and fixed whereas in a small team, everyone may have to do a bit of everything
- the type of work being completed, eg some tasks can only be done (or are done better) by someone with specialised training
- the project requirements, eg if a particular task is urgent, everyone may work together to get it done quickly.

The subcontractor (lead tradesperson) usually allocates tasks to team members at the start of the project or during team meetings.

It's essential that everyone on the team is clear about who's responsible for each task or part of a task. This helps to avoid confusion and duplication of effort and makes sure that the workload is distributed fairly and everything gets done.





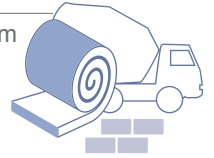
## Activity 4.2 Working in a team

Liam is completing the tiling in the kitchen area of a new house with Tim, who has been working with Liam since he qualified three years ago. Christine is in the first year of her apprenticeship and helping out.

Read the list of tasks below and write the name of the person you think should be assigned to each in the column on the right.



Task	Team member
Cleaning up debris, tools and equipment	
Laying and cutting tiles	
Ordering tiles from the supplier	
Grouting	
Decorative tiling	
Estimating the number of tiles needed for the job	
Mixing tile adhesive	
Attending site meetings with the builder	



## Working together

There are many advantages to working in a team. To make the most of the experience, it's important to remember that everyone brings their own knowledge, skills, experiences and history to the work environment.

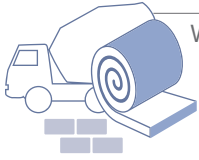
By choosing to accept and support your team mates, you can increase the effectiveness of the team and improve your own working experience.



Consider the following tips when you're working in a team.

- Communicate openly and constructively.
- Use active listening skills.
- Be reliable.
- Be cooperative and willing.
- Support and encourage team mates whenever you get a chance.
- Offer assistance when it's needed.
- Value differences of opinion and use them to make better decisions.
- Be respectful of others.

One of the most important responsibilities you will have on any worksite will be helping your team mates when they need it and encouraging them to improve their own skills and performance.

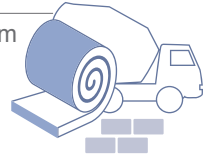


### Activity 4.3 Helping out

List three ways you can help a team mate in the following situations.

They speak a language other than English.	1. _____ 2. _____ 3. _____
They have little or no experience.	1. _____ 2. _____ 3. _____
They have too much to do.	1. _____ 2. _____ 3. _____
They have a physical impairment or a disability.	1. _____ 2. _____ 3. _____
They want to learn a new skill.	1. _____ 2. _____ 3. _____





### Activity 4.4 Encouraging team mates

If a team mate is having trouble with their work or if they're feeling apprehensive about a task, you can help them by offering encouragement. It is important to be positive and sincere, so they don't feel criticised or discouraged.

Read the following statements and decide if they would encourage or discourage a team mate.

	Encouraging	Discouraging
I think you can do it.		
What were you thinking?		
Let me do that.		
Let me give you some advice.		
How can we solve the problem?		
What do you think?		
When you're older, you'll understand.		
You worked really hard on that.		
I could use your help.		
I'll get someone else to do it.		
I know you did your best.		
What do you need?		

Did you find it hard to decide? Why? What influences the effect of the words you use when communicating with others? Discuss your opinions with your class and make some notes below.

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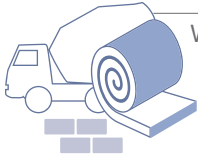
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## Barriers to teamwork

There are obstacles to good teamwork that can affect workers' performance and slow down or prevent site goals from being achieved. These obstacles include:

- poor communication
- unclear or unrealistic goals
- lack of skills or knowledge
- poor leadership
- poor organisation.

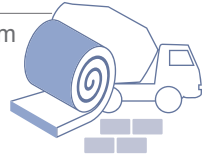
You're unlikely to be able to fix these issues yourself, so it's important to identify the appropriate person to talk to if you think the team's being negatively affected.

One of the most common barriers to effective teamwork is conflict or disharmony within the group. This can be caused by, for example:

- misunderstandings
- differences of opinion
- intolerance, prejudice and discrimination
- harassment and bullying
- overwork and stress
- doubts about success.



Conflict in the workplace, especially in a team environment, must be dealt with quickly to stop the problem from growing and becoming worse. When a solution can't be found by the people involved, it can be dealt with by a mediator; that is, an employer, supervisor or team leader whose opinion is respected and who can listen to all sides of the story to help find a fair and acceptable resolution.



### Activity 4.5 Conflict

Think about a time when you experienced conflict or disharmony at work or in your personal life. Answer the following questions below.

What was the situation?

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Who did you speak to about it?

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What did you do to resolve it?

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Looking back, would you have handled it differently? If so, how?

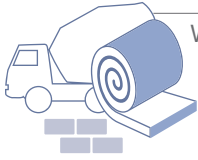
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## Improving teamwork

It's important for workers to discuss any improvements that may be required within a team. These discussions can be initiated by anyone, from a labourer to the most qualified worker. Making improvements to the way a team works is not done to blame or point a finger at an individual or group of people, but to improve the overall wellbeing and efficiency of the team itself.

Identifying areas of improvement within the team can provide the following benefits:

- better team morale
- working more efficiently as a group
- passing on skills and knowledge
- achieving site goals faster
- more work being offered in the future.



### Case study – Improving the team

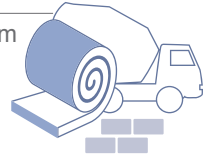


Jeremy and Christine were having lunch when he mentioned that their supervisor, Jim, had been a bit angry about how long it had taken him to unload the materials that had been delivered to the site that morning. Jeremy thought that if the whole team helped out, the first job of the day could have been finished very quickly and everyone would have what they needed before they started building.

Christine had unloaded materials before and had the same problem so she thought it was a great idea.

Jeremy thought that, as an apprentice, he should probably keep his idea to himself in case the others thought he was just being lazy.





### Activity 4.6 Improving the team

Tick the option below that describes what you think Jeremy should do next.

- ☐ Say nothing and continue to do as he was told.
- ☐ Wait for someone else to talk about the problem before making a suggestion.
- ☐ Mention it casually and hope somebody takes notice.
- ☐ Talk to his boss privately.
- ☐ Make his suggestion at a team meeting.

Briefly explain your choice below.

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What do you think Christine should do?

- ☐ Ignore Jeremy's idea and get back to work.
- ☐ Encourage Jeremy to talk to their boss.
- ☐ Take Jeremy's idea to the boss herself.
- ☐ Mention it at a team meeting so that Jeremy has to explain his idea.

Briefly explain your choice below.

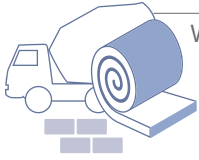
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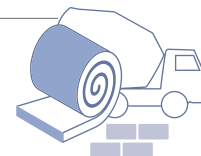
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## Section 5 – Developing your skills

### Introduction

To be a tradesperson in the construction industry you need many skills and will usually have to be formally trained and qualified. Some jobs even require licences that prove that you have the knowledge and skills to expertly and safely perform your tasks.

The course you're currently completing is just the first step towards a working life of continuous learning.



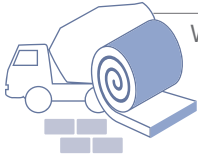
In this section you'll look at:

- the types of skills you need
- the qualifications required to be a tradesperson
- how to identify your own learning needs
- opportunities to improve your skills and learn more.



#### Performance criteria

- 4.1 Skills and knowledge necessary to work effectively in the construction industry are identified.
- 4.2 Steps are taken, in consultation with appropriate personnel, to identify own **learning needs** for future work requirements.
- 4.3 Appropriate opportunities to learn and develop required skills and knowledge for future construction industry work opportunities are identified and evaluated.



## Skills and knowledge

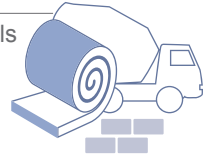
There are two different types of skills that you'll need to develop to work effectively in the construction industry – those directly connected to your trade, such as mixing mortar or laying bricks, and general employability skills like time management, problem solving and teamwork.



Having the right skills will help you to:

- be more employable
- perform better in the workplace
- expand your role
- progress into higher positions within a company or workplace
- stay up-to-date with industry changes
- help your organisation to achieve its goals.





### Activity 5.1 Trade-specific skills

Go to the Australian Government Job Outlook web page at <<http://joboutlook.gov.au>> and use the alphabetical search to locate your chosen trade. Use the information from the website to answer the questions below.

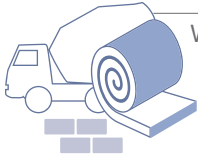
**Trade name:**

List five tasks you may have to perform.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

List and describe the five most important skills for your trade.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

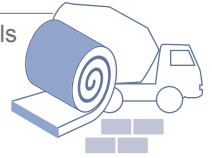


## Activity 5.2 Employability skills

Read the following descriptions of the employability skills you need to work in the construction industry. For each skill, tick whether you think you are good at it, you could use some practice or you need help to develop your abilities.

Employability skill	I am good at this.	I need to practise this.	I need help with this.
<b>Communication</b> involves listening, speaking, reading, writing, empathising, interpreting, and sharing information.			
<b>Team work</b> involves working with different races, genders and types of people, being part of a team, coaching, mentoring, and giving feedback.			
<b>Problem-solving</b> involves finding solutions to problems, troubleshooting and thinking of ways to overcome obstacles.			
<b>Initiative and enterprise</b> involves having ideas and making them happen, adapting to changing situations, seeing opportunities and having a creative, long-term vision.			
<b>Planning and organising</b> involves planning how to use time, money or energy, thinking about how to do a big project, making decisions, collecting and analysing information, and coordinating yourself or other people.			
<b>Self-management</b> involves taking responsibility for yourself, having personal plans and making them happen, and being able to explain yourself and what you want and need.			
<b>Learning</b> involves being willing to learn new things, trying out a range of ways to learn (online, books, demonstrations, etc), sharing information with others, and accepting that learning is necessary.			
<b>Technology</b> involves using technology, having a range of skills, and being willing to learn new ones.			

These skills are important, not only you're starting out but throughout your career.



## Identifying your learning needs

At the beginning of your career in the construction industry, you'll need to complete formal training to be eligible for employment in your chosen trade. This usually involves completing a recognised qualification at a registered training organisation (RTO) or college.

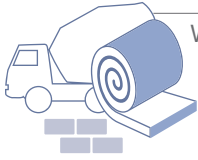


### Activity 5.3 Trade qualifications

Go to the Australian Government My Skills web page at <[www.myskills.gov.au](http://www.myskills.gov.au)> and find the qualifications you would need to complete for the following trades in your state or territory.

**Note:** The number below the qualification name is the course code. If the code has letters at the end, it is specific to a particular state or territory. For example, 52660WA is the Certificate III in Bricklaying (Housing) in Western Australia.

Trade	Qualification
Bricklayer/ blocklayer	<hr/> <hr/> <hr/>
Carpenter/joiner	<hr/> <hr/> <hr/>
Concreter	<hr/> <hr/> <hr/>
Painter and decorator	<hr/> <hr/> <hr/>
Plasterer	<hr/> <hr/> <hr/>

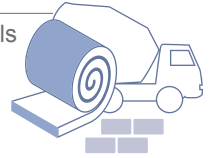


Roof tiler	<hr/> <hr/> <hr/>
Sign-writer	<hr/> <hr/> <hr/>
Wall and ceiling liner	<hr/> <hr/> <hr/>
Wall and floor tiler	<hr/> <hr/> <hr/>



Recognition of prior learning (RPL) is a process that assesses the skills you already have which may be credited towards your qualification.

Do you have skills from previous training, work experience (paid or volunteer work) or your recreational pursuits that may be useful when applying for training or employment opportunities?



Learning the skills you need for a construction trade doesn't stop when you complete a qualification. Depending on your situation, work requirements or career goals, you may need:

- a higher qualification
- extra skills, eg first aid, time management
- job-specific skills developed by on-the-job training
- expanded skills learned through job rotation
- to refresh skills you haven't used in a while.



### Activity 5.4 Your learning needs

There are a lot of people who can help you figure out what you need to learn and how to go about it – probably more than you think.

With a partner, list all the people who could give you advice. Think about the people who know you from school or work, or from recreational activities like sports clubs.

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Which of the people on your list do you think would be the most helpful? Make a note below and describe why you chose this person.

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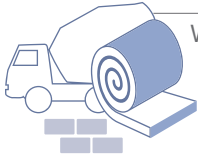
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## Opportunities to learn

Learning new information or skills is not restricted to schools and trade colleges. There are many organisations and sources of information that exist to support your development as a tradesperson. These include industry associations, trade magazines and the internet.

Your employer or supervisor might organise specific skills training for you or send you to a trade event or presentation. However, it's important for you to participate in your own career development by actively seeking out learning opportunities.



### Activity 5.5 Learning opportunities

Use the internet to research the following learning opportunities that could improve your trade-specific or employability skills. Answer the questions below with guidance from your lecturer.

List three short courses available in your local area.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

List three trade journals related to your chosen trade.

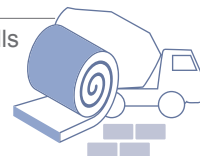
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

List two industry events (trade shows, presentations, conferences, etc) that will occur in your state or territory this year.

1. \_\_\_\_\_
2. \_\_\_\_\_

List three websites that would be useful to you in your chosen trade.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

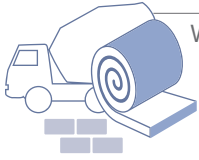


List four examples of industry associations for the construction industry and your chosen trade.

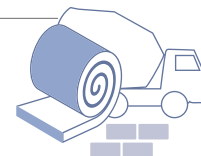
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_



On a construction site you have the opportunity to learn new skills every day by working with more experienced tradespeople, participating in job rotations to experience different tasks and volunteering to perform extra duties whenever possible.







## Section 6 – Working sustainably

### Introduction

The construction industry has a significant impact on the environment. Most construction projects consume a lot of natural resources in both materials and the energy used during the building process. Construction projects can also produce a lot of waste.

Working sustainably means adopting work practices that:

- make the best use of materials and natural resources
- maximise efficient energy use
- minimise harm to the environment
- produce efficient buildings.

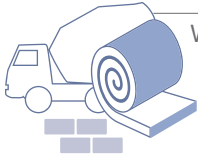


Companies and individuals need to adopt these work practices while maintaining on-the-job efficiency. When you start out in the construction industry, you might not have a say on the design of a building or the management of a project, but you can still play an important part in what happens on site.



#### Performance criteria

- 5.1 Work site **environmental and resource efficiency issues** and resources used in own work role are identified and recorded using **appropriate techniques**.
- 5.2 Work site **environmental hazards** relating to the use of resources are identified and reported to designated personnel.
- 5.3 Enterprise plans to improve environmental practices, **environmental requirements** and resource efficiency are followed.
- 5.4 **Suggestions** are made for improvements to work site practices in own work area.
- 6.1 Procedures are followed to ensure compliance with environmental requirements.
- 6.2 Breaches or potential breaches are reported to **designated personnel**.



## Legislation, Regulations and codes

There are legal requirements and guidelines for sustainability and environmental protection in the construction industry.

Legislation, sometimes called Acts of Parliament, are the state or territory laws that govern the way we live and work in Australia. Some sustainability and environmental legislation is specific to the building industry and some has a broader application; that is, it applies to other industries as well.

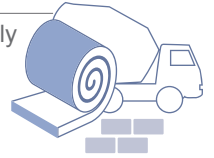
Regulations are the practical implementation of legislation and are issued by a government agency. They are essentially a set of rules specifying how the legislation should be implemented. Regulations are often called 'codes'.



### Activity 6.1 Legislation

Use the internet to find three examples of the legislation or Acts, Regulations or codes that relate to environmental protection and sustainability in your state or territory. Write their full names and a short description of what they cover below.

Name	Description
1. _____ _____ _____	_____ _____ _____
2. _____ _____ _____	_____ _____ _____
3. _____ _____ _____	_____ _____ _____



## Sustainable work practices

Companies, employers or work teams create policies and procedures to let workers know how tasks should be done and what standards of work, equipment and materials are required. They ensure that laws and Regulations are followed and company requirements are met. These include:

- how resources should be managed on site
- how energy should be used on site
- how waste should be managed on site.



Some workplaces are committed to making improvements to sustainability and environmental protection above and beyond those required by legislation or Regulations.

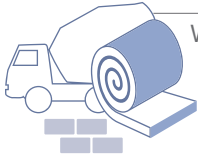
## Using materials sustainably

Choosing the right building materials and managing the way in which they're used is one of the most important factors in reducing the consumption of natural resources and minimising environmental damage.

Sustainable building materials are materials that have less impact on the environment than their traditional equivalents. This means they meet one or more of the following criteria. They:

- are made from a raw material that is renewable
- are a recycled product or contain recycled materials
- are a salvaged material
- have improved performance.





## Activity 6.2 Sustainable materials

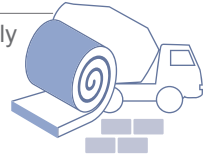
Use the internet to find three examples of sustainable materials. List them below and describe what makes them sustainable.

Material	Description
1. _____ _____ _____ _____	_____ _____ _____ _____
2. _____ _____ _____ _____	_____ _____ _____ _____
3. _____ _____ _____ _____	_____ _____ _____ _____



No matter what material is chosen, it is the way it's managed and used on site that will have the biggest effect on sustainability. The construction industry generates millions of tonnes of waste each year and this results in:

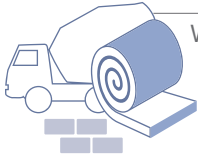
- greater consumption of natural resources
- more landfill and pollution
- risk of exposure to hazardous materials
- higher costs.



### Activity 6.3 Reducing waste

Discuss with your class how the following day-to-day work practices can reduce the amount of material you waste on a construction task. Make notes below.

Clarifying instructions	<hr/> <hr/> <hr/> <hr/>
Keeping an inventory of what you have	<hr/> <hr/> <hr/> <hr/>
Checking delivery dockets	<hr/> <hr/> <hr/> <hr/>
Reporting faults or damage	<hr/> <hr/> <hr/> <hr/>
Measuring accurately	<hr/> <hr/> <hr/> <hr/>
Keeping records of what you've used	<hr/> <hr/> <hr/> <hr/>



Secure storage	<hr/> <hr/> <hr/> <hr/>
Communicating with workmates	<hr/> <hr/> <hr/> <hr/>



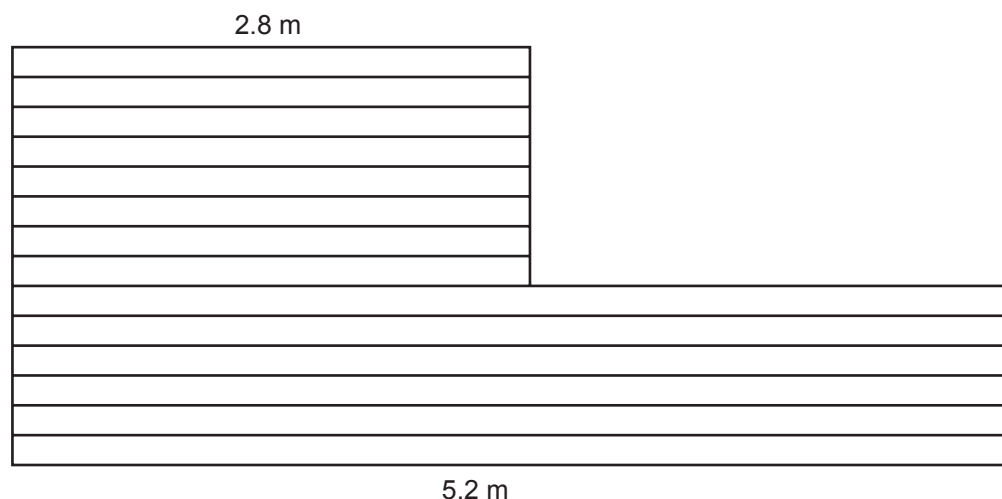
### Activity 6.4 Using materials



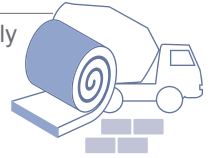
Katherine asks Jeremy to cut some timber for her so that she can build a small deck. Four different lengths of timber are available – 2.4 m, 3.6 m, 5.4 m and 6 m. The client specifies that there should be no joins, so each length of decking must cover the entire width.

Which lengths should Jeremy choose? How many of each will he need to provide Katherine with what she needs? Katherine tells Jeremy to waste as little timber as possible.

Use the diagram below as a guide then fill in the spaces below.



Lengths	Quantity	Lengths	Quantity
2.4 m		5.4 m	
3.6 m		6.0 m	



Explain your choices here.

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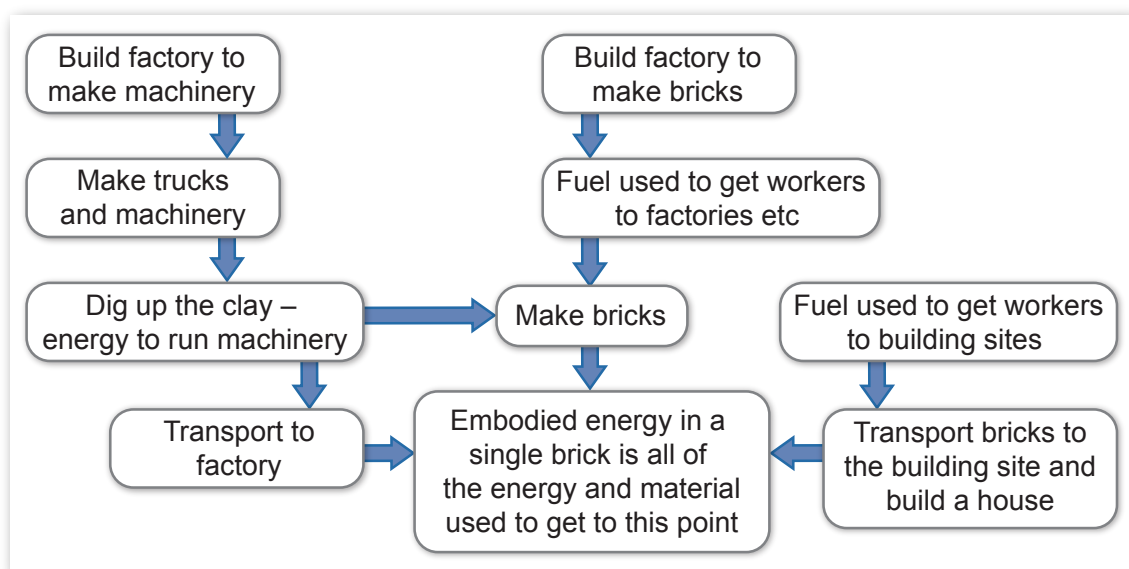
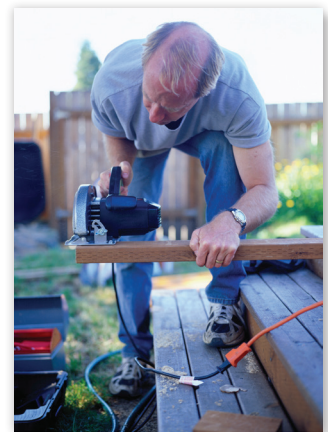
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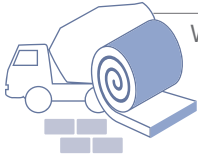
## Using energy efficiently

Energy use affects the environment by using up limited natural resources like coal and oil and by releasing greenhouse gases that damage the atmosphere.

There are two types of energy used in the construction industry – operating and embodied. You're probably more familiar with operating energy which is the energy you use when you plug tools directly into the main power supply.

Embodied energy is all the energy used in producing or making something. For example, the diagram below shows the embodied energy used in brick production.



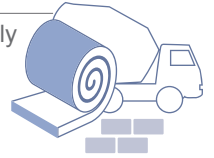


### Activity 6.5 Reducing energy usage

With your class, discuss how the amount of operational and/or embodied energy used on a construction project could be reduced in the following ways. Make some notes below.

Choice of materials	<hr/> <hr/> <hr/> <hr/>
Choice of tools	<hr/> <hr/> <hr/> <hr/>
How tools are used	<hr/> <hr/> <hr/> <hr/>
Maintenance of tools and equipment	<hr/> <hr/> <hr/> <hr/>
Transport	<hr/> <hr/> <hr/> <hr/>





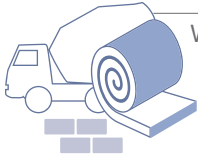
## Handling hazardous materials

Tradespeople in the construction industry regularly use materials that can be hazardous; that is, handling, storing and disposing of some materials and products can harm people, animals, plants, soil and waterways.



Before you use any materials, you need to know how they will affect the environment and how you should handle them or dispose of any by-products or waste. There should be documentation for any hazardous material used and stored on a construction site. You can find information in:

- safety data sheets (SDSs)
- chemical registers
- safe work method statements (SWMSs)
- warning signs and symbols
- manufacturers' specifications
- product labels.



## Activity 6.6 Hazardous materials

SDSs are provided by manufacturers to explain how to safely use a material or substance that might be hazardous to the user or the environment.

Use the internet to find an example of an SDS and use the information to answer the following questions.

What is the name of the product?

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What are the risks involved in using the product?

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Are there any environmental precautions?

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What is the ecological information?

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What are the storage recommendations?

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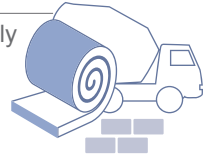
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What are the disposal recommendations?

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## Waste management

Most worksites have policies for safely managing waste to reduce environmental damage. Waste management plans should include procedures for:

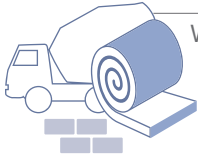
- minimising landfill waste
- separation of recyclable materials
- safe disposal of hazardous waste
- protection of stormwater drains
- safe clean-up procedures.

Stormwater protection is a particularly important issue on many construction sites. Litter, hazardous substances and building materials like gravel and concrete can get into stormwater drains and ultimately end up in the ocean or wetlands.



Clean-up and waste management can actually cause damage if correct procedures aren't followed. Some environmental hazards like asbestos can only be cleaned up by removing the topsoil along with the hazard which damages soil structure and removes plants and seeds. These kinds of hazards can be cleaned up only by specialists.

Companies and individuals face serious penalties for allowing waste into the stormwater system or for damaging the environment with ineffective waste management practices.



### Activity 6.7 Waste management

List some ways you could contribute to waste management on a construction site. An example has been done for you.

*Putting general rubbish and recycling into the correct bins.*

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## Reporting breaches

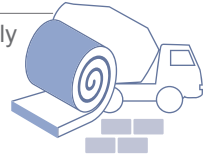
If you spot an environmental hazard or a potential breach of environmental protection requirements, you have a legal and moral responsibility to take action. If you can't eliminate or minimise the hazard without exposing yourself to injury or harm, you must report it.



### Case study – Improving the team

Christine sees a leaking container in a corner of the worksite. She can't find a label on the container but it smells like a chemical. As nobody works in this area, she doesn't know how long it's been there or how much liquid has been spilled.





### Activity 6.8 Reporting breaches

Tick the options below that describe what you think Christine should do next. There may be more than one.

- ☐ Clean up the spill.
- ☐ Put up a barrier or hazard sign.
- ☐ Mention it at a team meeting.
- ☐ Tell her supervisor.
- ☐ Report it to the local council.

Briefly explain your choice below.

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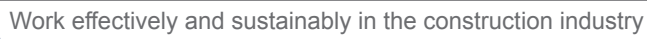
## Making improvements

Everyone can contribute ideas about working more sustainably and protecting the environment. It's important to keep up-to-date with changes in technology, environmental research and legislation. Some current environmental issues that may benefit the construction industry are:

- renewable and reusable resources
- non-traditional products and materials
- energy and water conservation
- alternative sources of energy.



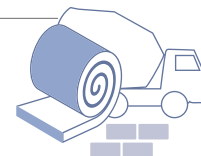
You can participate by passing on information and making suggestions about any new products or practices you come across.

[illegible]





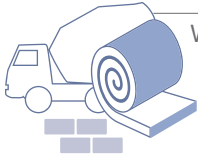




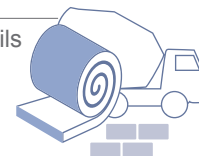
## Annex A – Unit details

<b>Unit title</b>	<b>Work effectively and sustainably in the construction industry</b>
<b>Descriptor</b>	This unit of competency specifies the outcomes required to prepare for and sustain effective work within the construction industry. It covers the identification and clarification of the construction industry work context, scope and employment conditions, responsibility required to be accepted by the individual, working in a team, individual career path improvement activities and sustainable work practices and techniques.
<b>National code</b>	CPCCCM1012A
<b>Employability skills</b>	This unit contains employability skills.
<b>Prerequisite units</b>	Nil
<b>Application</b>	This unit of competency supports the attainment of basic understanding of the structure, culture and role expectations of workers within the construction industry and sustainable use of materials and resources.

<b>Element 1 Identify industry structure, occupations, job roles and work conditions</b>	
1.1	Scope and nature of the construction industry and its national economic importance are recognised.
1.2	<b>Construction job roles</b> , occupations and trade callings of the construction industry are identified and related to direct and indirect employment opportunities.
1.3	Trends in technology, work processes and environmental issues which are likely to impact on the construction industry are identified and evaluated in terms of employment options.
1.4	Construction employment conditions, organisational requirements, responsibilities and duties are identified and related to jobs and career paths.
1.5	Safe work methods and practices are identified to meet Australian government and state and territory OHS legislative requirements.



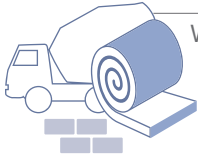
Element 2 Accept responsibility for own workload
2.1 Work activities are planned and priorities and deadlines are established with <b>work group members</b> such as supervisors and communicated to others whose own work plans and timelines may be affected.
2.2 Work is completed against the plan and to the standard expected in the workplace and in accordance with any guidelines, directions and specifications provided by supervisors, including use of <b>personal protective equipment</b> .
2.3 Variations and difficulties affecting performance or <b>quality requirements</b> of own work are identified and these issues reported to appropriate personnel using appropriate communication techniques and accessing relevant <b>information</b> .
2.4 Additional support needed to achieve or improve work outcomes or quality is communicated clearly to the appropriate personnel.
Element 3 Work in a team
3.1. Site goals and the contributions to be made by <b>teams</b> in a construction activity are identified and understood.
3.2. Individual contributions to team activities are identified and confirmed with others in the team.
3.3. Assistance and encouragement are provided to other team members wishing to meet or enhance their role and the role of the team.
3.4. Team improvements are initiated where possible and/or encouraged from other team members.
3.5. Causes of disharmony and other barriers to achievement are referred to the appropriate party for resolution.
Element 4 Identify own development needs
4.1 Skills and knowledge necessary to work effectively in the construction industry are identified.
4.2 Steps are taken, in consultation with appropriate personnel, to identify own <b>learning needs</b> for future work requirements.
4.3 Appropriate opportunities to learn and develop required skills and knowledge for future construction industry work opportunities are identified and evaluated.

**Element 5 Identify current resource use and identify opportunities to improve resource efficiency**

- 5.1 Work site ***environmental and resource efficiency issues*** and resources used in own work role are identified and recorded using ***appropriate techniques***.
- 5.2 Work site ***environmental hazards*** relating to the use of resources are identified and reported to designated personnel.
- 5.3 Enterprise plans to improve environmental practices, ***environmental requirements*** and resource efficiency are followed.
- 5.4 ***Suggestions*** are made for improvements to work site practices in own work area.

**Element 6 Comply with environmental regulations**

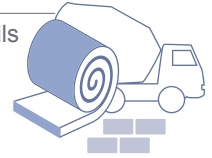
- 6.1 Procedures are followed to ensure compliance with environmental requirements.
- 6.2 Breaches or potential breaches are reported to ***designated personnel***.



## Required skills and knowledge

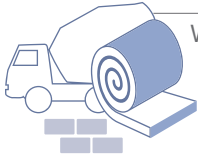
### Required skills

- communication skills to:
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - establish and communicate deadlines
  - follow supervisor's instructions
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
  - report faults
  - report variations or difficulties in performance and additional support required
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
  - written skills to record resource use
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions.



## Required knowledge

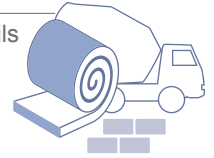
- basic understanding of sustainability on a construction work site
- common construction industry terminology and interpersonal communication requirements
- construction industry quality requirements
- construction industry size, scope of work and national economic importance
- environmental and resource hazards/risks, including compliance with relevant legislation associated with the environment, job specifications and procedures
- federal, state, and territory environmental or sustainability legislation, regulations and codes of practice relevant to this sector and applicable to own work role, e.g. Building Code of Australia (BCA)
- job safety analysis (JSA) and safe work method statements
- relevant environmental and resource efficiency systems and practices
- relevant industrial awards and enterprise agreements
- relevant legislation, regulations and workplace requirements relating to provisions covering discrimination and equal employment opportunity
- site meeting procedures
- typical site/team work structure, methods and communication processes.



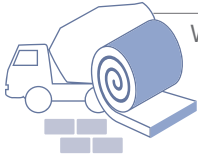
## Evidence guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> <li>locate, interpret and apply relevant construction industry information, standards and specifications</li> <li>comply with site safety plans and OHS legislation, regulations and codes of practice applicable to workplace operations</li> <li>comply with organisational policies and procedures, including quality requirements</li> <li>communicate and work effectively and safely with others</li> <li>explain to others scope, employment and economic importance of the construction industry</li> <li>locate and identify documentation on site employment conditions and source of these conditions</li> <li>set personal and team work goals and participate in site meetings</li> <li>respond to personal conflict situations</li> <li>identify personal development needs and apply learning to future work tasks</li> <li>follow workplace procedures according to instructions given and report information only at own level of responsibility, including: <ul style="list-style-type: none"> <li>complying with environmental/sustainability legislation, and organisational and procedural requirements relevant to specific daily responsibilities</li> <li>use of tools, such as an inspection checklist to collect and measure relevant information on resource and energy consumption</li> <li>participating in and supporting improved environmental use of resources</li> <li>recognising efficiency processes involving work practices and reporting as required.</li> </ul> </li> </ul>

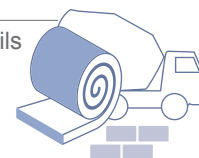


<p><b>Context of and specific resources for assessment</b></p>	<p>This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> <li>• an induction procedure and requirement</li> <li>• realistic tasks or simulated tasks covering the mandatory task requirements</li> <li>• relevant specifications and work instructions</li> <li>• tools and equipment appropriate to applying safe work practices</li> <li>• support materials appropriate to activity</li> <li>• workplace instructions relating to safe work practices and addressing hazards and emergencies</li> <li>• material safety data sheets</li> <li>• research resources, including industry-related systems information.</li> </ul> <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p>
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<b>Method of assessment</b>	<p>Assessment methods must:</p> <ul style="list-style-type: none"><li>• satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package</li><li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li><li>• reinforce the integration of employability skills with workplace tasks and job roles</li><li>• confirm that competency is verified and able to be transferred to other circumstances and environments.</li></ul> <p>Validity and sufficiency of evidence requires that:</p> <ul style="list-style-type: none"><li>• competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace</li><li>• where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge</li><li>• all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.</li></ul> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.</p>
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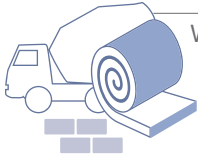




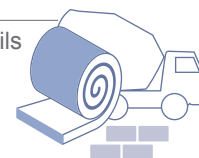
## Range statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

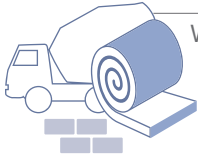
<b>Construction job roles</b> include:	<ul style="list-style-type: none"> <li>• bricklaying and blocklaying</li> <li>• carpentry</li> <li>• concreting</li> <li>• demolition</li> <li>• dogging</li> <li>• formwork and falsework</li> <li>• painting and decorating</li> <li>• rigging</li> <li>• roof tiling</li> <li>• scaffolding</li> <li>• solid plastering</li> <li>• steelfixing</li> <li>• wall and ceiling lining</li> <li>• wall and floor tiling</li> <li>• waterproofing.</li> </ul>
<b>Organisational requirements</b> include:	<ul style="list-style-type: none"> <li>• access and equity principles and practice</li> <li>• anti-discrimination and related policy</li> <li>• business and performance plans</li> <li>• ethical standards</li> <li>• goals and objectives</li> <li>• legal and organisation policy, guidelines and requirements</li> <li>• quality</li> <li>• systems and processes.</li> </ul>
<b>Responsibilities and duties</b> include:	<ul style="list-style-type: none"> <li>• codes of conduct</li> <li>• job description and employment arrangements</li> <li>• organisation's policy relevant to work role</li> <li>• skills training and competencies</li> <li>• supervision and accountability requirements, including OHS</li> <li>• team structures.</li> </ul>



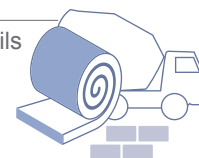
<p><b>Safe work methods and practices</b> include:</p>	<ul style="list-style-type: none"> <li>• access to site amenities, such as drinking water and toilets</li> <li>• day-to-day observation of OHS policies and procedures</li> <li>• emergency procedures and use of basic firefighting equipment</li> <li>• general requirements for safe use of plant and equipment</li> <li>• general requirements for use of personal protective equipment and clothing</li> <li>• housekeeping to ensure a clean, tidy and safer work area</li> <li>• no drugs and alcohol at work</li> <li>• preventing bullying and harassment</li> <li>• risk assessment</li> <li>• smoking in designated areas</li> <li>• storage and disposal of waste and debris according to established procedures and environmental protection requirements.</li> </ul>
<p><b>Australian government and state and territory OHS legislative requirements</b> include:</p>	<ul style="list-style-type: none"> <li>• Australian standards</li> <li>• construction industry OHS standards and guidelines</li> <li>• duty of care</li> <li>• health and safety representatives, committees and supervisors</li> <li>• licences, tickets or certificates of competency</li> <li>• National Code of Practice for Induction Training for Construction Work</li> <li>• national safety standards</li> <li>• OHS and welfare Acts and regulations</li> <li>• safety codes of practice, and JSA and safe work method statements.</li> </ul>
<p><b>Work group members</b> include:</p>	<ul style="list-style-type: none"> <li>• coach or mentor</li> <li>• employee representative</li> <li>• peers, work colleagues, team, enterprise and other members of the organisation</li> <li>• supervisor or manager.</li> </ul>



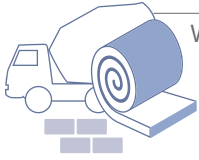
<b>Personal protective equipment</b> includes:	<ul style="list-style-type: none"> <li>• caps</li> <li>• dust masks and respirators</li> <li>• ear muffs and plugs</li> <li>• gloves</li> <li>• hard hats</li> <li>• high-visibility vests</li> <li>• jackets</li> <li>• overalls</li> <li>• safety glasses/goggles</li> <li>• steel-capped boots.</li> </ul>
<b>Quality requirements</b> include relevant regulations, including:	<ul style="list-style-type: none"> <li>• Australian standards</li> <li>• internal company quality policy and standards</li> <li>• manufacturer specifications, where specified</li> <li>• workplace operations and procedures.</li> </ul>
<b>Information</b> includes:	<ul style="list-style-type: none"> <li>• diagrams or sketches</li> <li>• instructions issued by authorised organisational or external personnel</li> <li>• manufacturer specifications and instructions</li> <li>• material safety data sheets (MSDS)</li> <li>• memos</li> <li>• organisation work specifications and requirements</li> <li>• plans and specifications</li> <li>• regulatory and legislative requirements</li> <li>• relevant Australian standards</li> <li>• safe work procedures or equivalent</li> <li>• signage</li> <li>• verbal or written and graphical instructions</li> <li>• work bulletins</li> <li>• work schedules.</li> </ul>
<b>Teams:</b>	<ul style="list-style-type: none"> <li>• is a generic term that refers to the site work organisation</li> <li>• may be known/titled locally as crews, gangs, shifts or other industrially and historically acceptable term.</li> </ul>

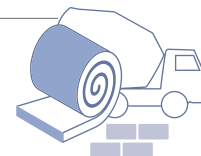


<p><b>Learning needs</b> and development processes include competency achievement/maintenance processes, which include:</p>	<ul style="list-style-type: none"> <li>• assessment processes</li> <li>• formal vocational education and training</li> <li>• on-the-job training and job rotation</li> <li>• recognition of prior learning</li> <li>• refresher training.</li> </ul>
<p><b>Environmental and resource efficiency issues</b> include:</p>	<ul style="list-style-type: none"> <li>• minimisation of environmental risks and maximisation of opportunities to improve environmental performance and to promote more efficient production and consumption of natural resources on the work site, for example by minimising waste, through participation in or use of a waste minimisation system</li> <li>• using resources efficiently, including reducing material usage and supporting efficient energy and water use, such as: <ul style="list-style-type: none"> <li>◦ air testing pipes</li> <li>◦ efficient fittings</li> <li>◦ insulation</li> <li>◦ site management to minimise stormwater pollution</li> <li>◦ strategic use of materials to reduce off-cuts and wastage</li> <li>◦ tool maintenance</li> <li>◦ transportation</li> <li>◦ using alternative practices, procedures and materials/products that reduce or eliminate resource consumption.</li> </ul> </li> </ul>
<p><b>Appropriate techniques</b> for recording resource use include:</p>	<ul style="list-style-type: none"> <li>• examination and documentation of resources on work site</li> <li>• examination and measurement of resources, materials and products from suppliers</li> <li>• examination of relevant information and data on efficiency and resource reduction</li> <li>• instructions and reports from other parties involved in the process of identifying and implementing improvements.</li> </ul>
<p><b>Environmental hazards</b> include:</p>	<ul style="list-style-type: none"> <li>• substances (e.g. resource, waste, by-product) that are dangerous to living things in the environment, such as humans, animals, plants and water, including storage, handling and disposal of the following substances: <ul style="list-style-type: none"> <li>◦ toxic</li> <li>◦ corrosive</li> <li>◦ flammable</li> <li>◦ explosive</li> </ul> </li> <li>• may be infectious or have other dangerous characteristics.</li> </ul>



<p><b>Environmental requirements</b> are to cover workplace quality management and include:</p>	<ul style="list-style-type: none"> <li>• clean-up protection</li> <li>• stormwater protection</li> <li>• waste management.</li> </ul>
<p><b>Suggestions</b> for sustainable use of resources includes ideas that help to:</p>	<ul style="list-style-type: none"> <li>• ensure appropriate use of materials and make recommendations to others to use sustainable products and practices</li> <li>• identify alternative sources of energy or energy conservation</li> <li>• improve energy and water efficiency</li> <li>• prevent and minimise risks and maximise opportunities, such as use of solar or grey water, and other alternative forms of energy/resources where appropriate</li> <li>• reduce emissions of greenhouse gases by reducing waste, transportation and use of non-renewable resources, such as energy, water, fuel, and materials</li> <li>• use alternative products/materials, procedures and installation techniques to support efficiency and sustainability</li> <li>• use renewable, recyclable, reusable and recoverable resources (energy, water, materials/products and waste).</li> </ul>
<p><b>Compliance with environmental requirements</b> includes:</p>	<ul style="list-style-type: none"> <li>• meeting relevant acts, laws, by-laws and regulations or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection, Biodiversity Conservation Act, BCA), including:             <ul style="list-style-type: none"> <li>◦ federal</li> <li>◦ industry</li> <li>◦ international</li> <li>◦ local government</li> <li>◦ organisation</li> <li>◦ reporting breaches</li> <li>◦ state and territory.</li> </ul> </li> </ul>
<p><b>Designated personnel</b> to be contacted are determined by the enterprise and include:</p>	<ul style="list-style-type: none"> <li>• managers</li> <li>• supervisors</li> <li>• other senior personnel assigned to particular work site roles, such as safety officer.</li> </ul>





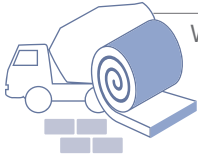
## Annex B – Assessments

### Assessment plan

The assessments suggested here for this unit are designed to assess your competency in the elements as listed in the unit details at Annex A to this guide. There are five components to the assessment.

Assessment	Elements
<b>Assessment 1 – Observation checklist</b> For this assessment, you will be observed working in a workshop, on the job or during work placement.	All
<b>Assessment 2 – Information leaflet</b> In this assessment you will prepare a information leaflet describing the purpose, size and economic importance of the construction industry.	1
<b>Assessment 3 – Trade profile</b> Using the template included in this guide, you will create a poster-sized profile of a construction trade, exploring key facts and employment opportunities.	1, 4
<b>Assessment 4 – Work placement review</b> This assessment requires you to complete a review of your work placement experience.	2, 3
<b>Assessment 5 – Interview on sustainability on the worksite</b> For this assessment, you are required to conduct an interview with your workplace employer or supervisor to examine on-site practices relating to sustainability and environmental protection.	5, 6

**Note:** Your lecturer may provide you with alternative assessments.



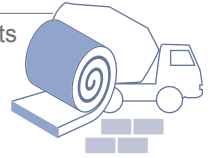
## Individual learning and assessment needs

Learners have different learning styles and needs. Please let your lecturer know if there is anything that may have an effect on your learning.

## Results and appeals

There is a process to be followed should you wish to appeal the result of your assessment. Please ask your lecturer for more information about this.





# Assessment 1 – Observation checklist

## Introduction

Your work practices will be observed by your lecturer, assessor or work placement supervisor. You will be assessed on your ability to:

- identify industry structure, occupations, job roles and work conditions
- accept responsibility for your own workload
- work in a team
- identify your own development needs
- identify current resource use and opportunities to improve resource efficiency
- comply with environmental regulations
- demonstrate the skills and knowledge required to work effectively and sustainably in the construction industry.

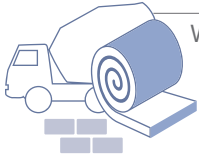
## Requirements

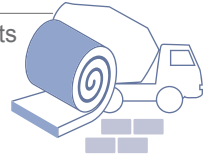
The 'Working effectively and sustainably observation checklist' will be used for observation purposes. This checklist must be signed by your lecturer, assessor or supervisor.

## Materials and equipment

To attempt this assessment you will need:

- the 'Working effectively and sustainably observation checklist' in this guide.





# CPCCCM1012A

## Work effectively and sustainably in the construction industry

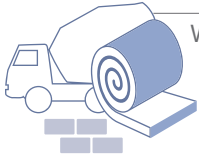
### Assessment 1 – Observation checklist

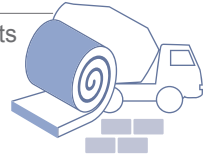
Name \_\_\_\_\_ Date \_\_\_\_\_

I have received feedback on this assessment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

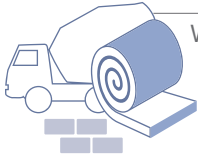
Assessor's initials





## Work effectively and sustainably observation checklist

During the work placement, did you observe the learner:	Yes	No	N/A
<b>Part 1 – Identify industry structure, occupations, job roles and work conditions</b>			
a) recognise the scope and nature of the construction industry and its national economic importance?			
b) identify construction job roles, occupations and trade callings of the construction industry and relate to direct and indirect employment opportunities?			
c) identify trends in technology, work processes and environmental issues which are likely to impact on the construction industry and evaluate in terms of employment options?			
d) identify construction employment conditions, organisational requirements, responsibilities and duties and relate to jobs and career paths?			
e) identify safe work methods and practices to meet Australian government and state and territory OHS/WHs legislative requirements?			
<b>Part 2 – Accept responsibility for own workload</b>			
a) plan and prioritise work activities and establish deadlines with work group members such as supervisors and communicate to others whose own work plans and timelines may be affected?			
b) complete work against the plan and to the standard expected in the workplace and in accordance with any guidelines, directions and specifications provided by supervisors, including use of personal protective equipment?			
c) identify variations and difficulties affecting performance or quality requirements of own work and report these issues to appropriate personnel using appropriate communication techniques and accessing relevant information?			
d) clearly communicate additional support needed to achieve or improve work outcomes or quality to the appropriate personnel?			
<b>Part 3 – Work in a team</b>			
a) identify and understand site goals and the contributions to be made by teams in a construction activity?			
b) identify individual contributions to team activities and confirm with others in the team?			
c) provide assistance and encouragement to other team members wishing to meet or enhance their role and the role of the team?			
d) initiate team improvements where possible and/or encourage from other team members?			
e) refer causes of disharmony and other barriers to achievement to the appropriate party for resolution?			
<b>Part 4 – Identify own development needs</b>			
a) identify skills and knowledge necessary to work effectively in the construction industry?			
b) take steps, in consultation with appropriate personnel, to identify own learning needs for future work requirements?			
c) identify and evaluate appropriate opportunities to learn and develop required skills and knowledge for future construction industry work opportunities?			



**Part 5 – Identify current resource use and identify opportunities to improve resource efficiency**

- |   |  |  |  |
|---|--|--|--|
| a) identify work site environmental and resource efficiency issues and resources used in own work role and record using appropriate techniques? |  |  |  |
| b) identify work site environmental hazards relating to the use of resources and report to designated personnel?                                |  |  |  |
| c) follow enterprise plans to improve environmental practices, environmental requirements and resource efficiency?                              |  |  |  |
| d) make suggestions for improvements to work site practices in own work area?   |  |  |  |

**Part 6 – Comply with environmental regulations**

- |  |  |  |  |
|--|--|--|--|
| a) follow procedures to ensure compliance with environmental requirements? |  |  |  |
| b) report breaches or potential breaches to designated personnel?          |  |  |  |

**Part 7 – Skills and knowledge**

- |   |  |  |  |
|---|--|--|--|
| a) identify and accurately report any faults in tools, equipment or materials to appropriate personnel?   |  |  |  |
| b) use numeracy skills to apply measurements and make calculations?   |  |  |  |
| c) use organisational skills, including the ability to plan and set out work?   |  |  |  |
| d) use a range of mobile technology, such as two-way radio and mobile phones?   |  |  |  |
| e) demonstrate knowledge of federal, state and territory environmental or sustainability legislation, regulations and codes of practice relevant to this sector and applicable to own work role, eg Building Code of Australia (BCA)? |  |  |  |
| f) demonstrate knowledge of job safety analysis (JSA) and safe work method statements?  |  |  |  |
| g) demonstrate knowledge of site meeting procedures?  |  |  |  |

**Feedback to learner**

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Learner's name:

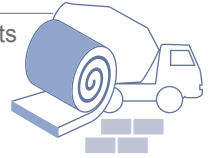
Assessor's name:

Learner's signature:

Assessor's signature:

Date:

Date:



## Assessment 2 – Information leaflet

### Introduction

This assessment assesses your ability to explain to others the purpose, size and economic importance of the construction industry.

### Requirements and format

Prepare an information leaflet about the construction industry. Include information about:

- what the industry does
- how it affects the country's economy and why it is important
- the amount of money spent on construction in Australia
- the number of people employed in the construction industry
- what sort of jobs/trades are involved.

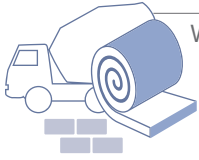
The leaflet should be presented on an A4 sheet. You may include images, charts and tables as required.

### Materials and equipment

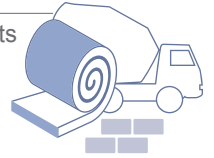
To attempt this assessment you will need:

- pens, pencils, eraser
- paper
- internet access.

You may choose to compile your leaflet on a computer. If so, you will require access to suitable software and a printer. You can discuss these requirements with your lecturer.







# CPCCCM1012A

## Work effectively and sustainably in the construction industry

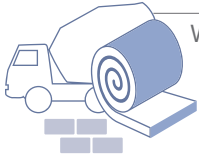
### Assessment 2 – Information leaflet

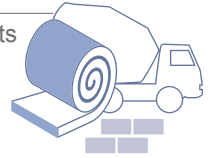
Name \_\_\_\_\_ Date \_\_\_\_\_

I have received feedback on this assessment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Assessor's initials





## Assessment 3 – Trade profile

### Introduction

This assessment is designed to assess your ability to identify:

- construction trades and job roles
- employment opportunities
- employment conditions and duties
- trends in technology and work practices
- safe work practices
- skills and knowledge needed for working in the construction industry
- learning needs and opportunities.

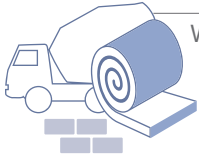
### Requirements and format

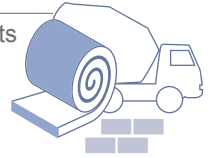
Answer the questions in the template provided in this guide to produce a profile of a construction trade. Your lecturer will provide further details.

### Materials and equipment

To attempt this assessment you will need:

- pens, pencils, eraser
- the Assessment 3 'Trade profile' worksheet in this guide
- internet access.





# CPCCCM1012A

## Work effectively and sustainably in the construction industry

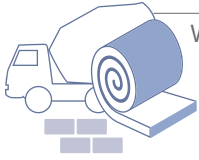
### Assessment 3 – Trade profile

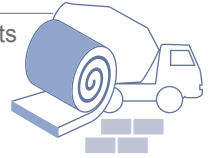
Name \_\_\_\_\_ Date \_\_\_\_\_

I have received feedback on this assessment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Assessor's initials





## Assessment 4 – Work placement review

### Introduction

This assessment is designed to assess your ability to:

- recognise site goals and the contributions made by trade teams
- plan and prioritise work activities
- follow plans and instructions to apply workplace standards and quality requirements
- work in a team.

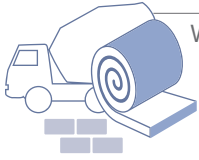
### Requirements and format

You are required to complete a review of your work placement experience and activities. Answer the questions in the 'Work placement review' provided in this guide.

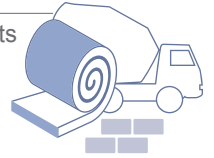
### Materials and equipment

To attempt this assessment you will need:

- pens, pencils, eraser
- the Assessment 4 'Work placement review' in this guide.







# CPCCCM1012A

## Work effectively and sustainably in the construction industry

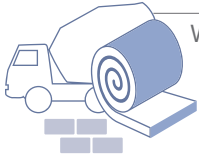
### Assessment 4 – Work placement review

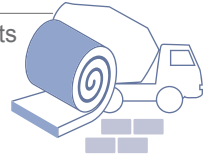
Name \_\_\_\_\_ Date \_\_\_\_\_

I have received feedback on this assessment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Assessor's initials





### Assessment 4 – Work placement review

Describe the overall site goal.

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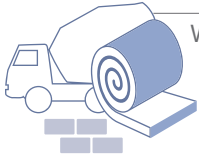
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List the trade teams you observed on site and describe the tasks they completed.

Trade team	Tasks
	<hr/> <hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/> <hr/>
	<hr/> <hr/> <hr/> <hr/>



List your work activities and deadlines.

Activity	Deadline

Describe how you organised and/or prioritised your tasks.

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Describe any guidelines or specifications your supervisor gave you about the quality, safety and/or environmental standards expected on the site.

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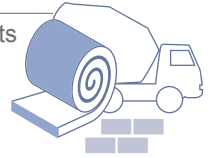
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List the PPE you were required to wear.

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Describe a difficulty you experienced when completing your tasks and how you overcame it. List the name of anyone you approached for help.

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Describe an activity where you helped a team member.

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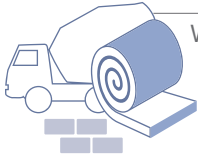
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Describe three ways in which your team communicated with each other.

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Describe a meeting you attended.

Meeting type:

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Attended by:

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Issues discussed:

1.

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2.

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3.

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4.

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Describe a situation you observed that caused disharmony or created a barrier to the team's achievement of goals. Who was responsible for resolving the situation?

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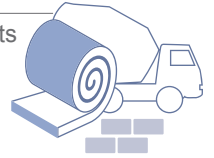
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List two suggestions you could make to improve the way your team worked to complete tasks.

1.

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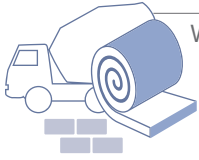
2.

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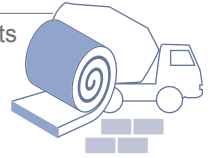
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## Assessment 5 – Interview on sustainability on the worksite

### Introduction

This assessment is designed to assess your ability to identify:

- identify environmental and resource efficiency issues on a construction site
- environmental hazards
- Regulations, policies and procedures and plans regarding sustainability and environmental requirements.

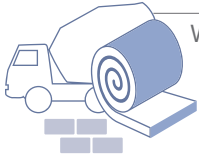
### Requirements and format

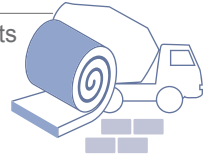
Use the questions provided in Assessment 5 'Interview on sustainability on the worksite' worksheet to conduct an interview with your work placement employer or supervisor. Your lecturer will provide further details about this assessment.

### Materials and equipment

To attempt this assessment you will need:

- the Assessment 5 'Interview on sustainability on the worksite' worksheet in this guide.





# CPCCCM1012A

## Work effectively and sustainably in the construction industry

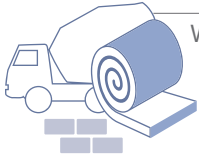
### Assessment 5 – Interview on sustainability on the worksite

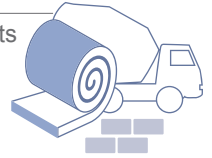
Name \_\_\_\_\_ Date \_\_\_\_\_

I have received feedback on this assessment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Assessor's initials





### Assessment 5 – Interview on sustainability on the worksite

Person interviewed: \_\_\_\_\_ Job role: \_\_\_\_\_

1. What are the main construction materials used for this project?

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2. What sorts of records are kept about these materials, eg inventories, ordering and delivery documentation?

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3. What is done with left-over materials?

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4. What hazardous substances are used on site?

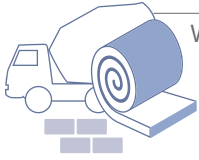
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5. What are the rules for handling and storing hazardous materials?

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6. Describe any special environmental issues or considerations on the site.

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7. Describe any alternative materials or practices used to reduce resource consumption.

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8. Describe any plans to reduce energy use on site.

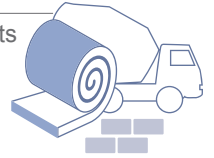
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9. What are the site/company policies and procedures for the following?

Waste management

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Stormwater protection

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Safe clean-up

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Tool and equipment maintenance

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10. Who would you report faults, hazards or breaches of environmental laws to?

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After you've completed the interview, answer the next question yourself.

What suggestions could you make for more sustainable work practices and resource use at this worksite?

[illegible]





# WORK EFFECTIVELY AND SUSTAINABLY IN THE CONSTRUCTION INDUSTRY

## CERTIFICATE II IN BUILDING AND CONSTRUCTION (PATHWAY – TRADES)

### CPCCCM1012A

## LEARNER'S GUIDE

### DESCRIPTION

This learner's guide will provide you with a basic understanding of the scope and nature of the construction industry, the role expectations of workers and the sustainable use of materials and resources. It contains a mix of content and hands-on activities that support the unit CPCCCM1012A *Work effectively and sustainably in the construction industry* from the Certificate II in Building and Construction (Pathway – Trades). The course, and this guide, focuses on the skills and knowledge required to get your career started as a tradesperson in the building and construction industry.

The topics covered in this guide include:

- the structure, scope and economic importance of the construction industry
- occupations, trades and employment opportunities
- working conditions, responsibilities and duties
- working effectively as an individual and as part of a team.

You will also learn about environmental issues and requirements for working sustainably in the construction industry. Suggested assessment activities are included.

### EDITION

Edition 1, 2014

### TRAINING PACKAGE

CPC08 Construction, Plumbing and Services Training Package

### COURSE / QUALIFICATION

Certificate II in Building and Construction (Pathway – Trades)

### UNIT OF COMPETENCY

CPCCCM1012A *Work effectively and sustainably in the construction industry*

### RELATED PRODUCTS

This resource is one in a series that covers all six core units for the Certificate II in Building and Construction (Pathway – Trades) qualification. Please refer to the WestOne product catalogue for more information.



#### ORDERING INFORMATION:

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