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# Integrated assignments

## Introduction

There are two integrated assignments supporting these materials:

1 Risk assessment

2 Getting the job done.

These provide learners with an opportunity to extend and apply the skills they have developed within their vocational course and through the use of these materials. They are structured in a similar style to Key Skills assignments, but the content reflects learning from particular modules.

## Introducing the assignments

Teachers should go through the assignments with learners to check that they understand the tasks and have strategies for tackling each one. Learners can be asked to produce an action plan or checklist, to ensure that they are clear about the demands of each task within the assignment. Learners should be made aware of the signposting to the relevant modules within the materials for Embedded Learning if they need to look back and check some skills.

## Assessing learners

Learners are expected to complete tasks independently with the minimum of teacher input. The marking scheme identifies the units and elements of the National Occupational Standards, Key Skills and the Adult Core Curricula for Literacy and Numeracy.

Learners' performance can be assessed on all three aspects of the task or one specific area. Coverage of the National Occupational Standards includes some performance criteria and/or underpinning knowledge from the NVQ. Additional questioning or observation of tasks may provide sufficient evidence for learner portfolios.

# Integrated assignment 1

## Risk assessment

Health and safety is very important in the workplace. Your employer is responsible for providing a safe working environment. You are also responsible for your *own* health and safety and the health and safety of *others*. This includes your workmates, customers and other members of the public.

In this assignment you can show your knowledge of health and safety issues within your own work area. You will need to complete Parts A–D.

- A Complete a risk assessment for a job at work.
- B Research two hazards and safe methods of work.
- C Describe an accident using an Accident report form.
- D Make a list of people who would be involved in investigating an accident.

### PART A

- 1 Think about a job or task that you may be asked to do at work. Write a brief description.
- 2 Use the risk assessment table on the next page to list any risks or hazards related to this task. These may be risks that apply to your work role in general or risks that are related just to this task.

Think about:

- the people involved
  - the materials or equipment being used
  - the work area.
- 3 Complete the risk assessment table on the next page to show what action you think should be taken to ensure safe working, and identify who is responsible for this action.

If you have any problems with this task you can look at 'Site safety' in Module 2: Health and safety.

## Risk assessment table

Description of task:		
Hazard or risk	Methods or actions to ensure safe working	Person responsible

### PART B

Find out as much as you can about two of the hazards you have identified and the methods you can use to protect people.

Make sure you have included the following:

- what the hazard is
- how it affects people in your workplace
- methods you can take to avoid accidents
- actions to take if an accident happens.

Present your findings using graphics.

#### Sources of information and evidence you can use

- Workplace policies and procedures
- Leaflets or booklets from the Health and Safety Executive (HSE)
- The Internet, e.g. [www.hse.org.uk](http://www.hse.org.uk)
- Photographs with explanations
- Drawings or plans of the work area
- Examples of safety signs and symbols that relate to this work area
- A colleague or supervisor

Photocopy and highlight anything that relates to the hazards you have identified.

If you have any problems with this task you can look at 'Site safety' in Module 2: Health and safety.

#### Note

You may want to add more information to the Risk assessment table in Part A after you have completed your research.

## PART C

Think again about the safe working methods for this job. What might happen if these are not used? Discuss this with your teacher or with a partner.

Think about a possible accident that may occur. Use this information to complete an Accident report form. (Use the Accident report form from the Source material or download a form from the RIDDOR website [www.riddor.gov.uk](http://www.riddor.gov.uk).)

*Before you start to complete the Accident report form, you may find it useful to make notes using the headings from the form.*

## PART D

Make a list of all the people who would be involved in reporting and investigating an accident in your workplace.

Make sure you find out what each person is responsible for.

Explain this to a colleague or your teacher.

If you have any problems with this task you can look at 'Reporting accidents' in Module 2: Health and safety.

If you have any problems with this task, talk to your health and safety representative.

<b>Skills for Construction Integrated assignment 1: Risk assessment</b> This assignment relates to Unit No: VR01 of the Occupational Standards and practises the skills developed in the following materials for Embedded learning – Module 2 Health and safety.							
Part A: Complete a risk assessment for a job at work.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR01.1	<ul style="list-style-type: none"> <li>Identify hazards associated with the workplace and record and report in accordance with organisational procedure.</li> </ul>			Wt/L1.2  HD1/E3.4	<ul style="list-style-type: none"> <li>Judge how much to write and the level of detail to include.</li> <li>Organise and represent information in different ways so that it makes sense to others.</li> </ul>		
Part B: Research two hazards and safe methods of work.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR01.1	<ul style="list-style-type: none"> <li>Identify hazards associated with the workplace and record and report in accordance with organisational procedure.</li> </ul>			Rt/L2.2  Slc/L1.2  Wt/L2.4  Wt/L2.6	<ul style="list-style-type: none"> <li>Read and understand a range of information from different sources.</li> <li>Make requests and ask questions to obtain information in familiar and unfamiliar contexts.</li> <li>Use format and structure to organise writing for different purposes.</li> <li>Use different styles of writing for different purposes.</li> </ul>		

Part C: Describe an accident using an Accident report form.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR01.4	<ul style="list-style-type: none"> <li>Comply with all emergency procedures in accordance with organisational policy.</li> </ul>			Wt/L2.2 Wt/L2.3 Wt/L2.4 SLd/L1.1	<ul style="list-style-type: none"> <li>Judge how much to write and the level of detail to include.</li> <li>Present information and ideas in a logical sequence.</li> <li>Use format and structure to organise writing for different purposes.</li> <li>Follow and contribute to discussions on a range of straightforward topics.</li> </ul>		
Part D: Make a list of people who would be involved in investigating an accident.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR01.4	<ul style="list-style-type: none"> <li>Comply with all emergency procedures in accordance with organisational policy.</li> </ul>			Wt/L1.5 SLc/L2.4	<ul style="list-style-type: none"> <li>Use format and structure for different purposes.</li> <li>Present information and ideas in a logical sequence and provide further detail and development to clarify or confirm understanding.</li> </ul>		
<b>Key Skills:</b> Successful completion of this assignment will cover the following Key Skills: Part A and Part C – Level 1 C1.3 Write two different types of documents ... Part B and Part D – Level 2 C2.2 Read and summarise ...; C2.3 Write two different types of documents ...; C2.1b Give a short talk ...							

# Integrated assignment 2

## Getting the job done

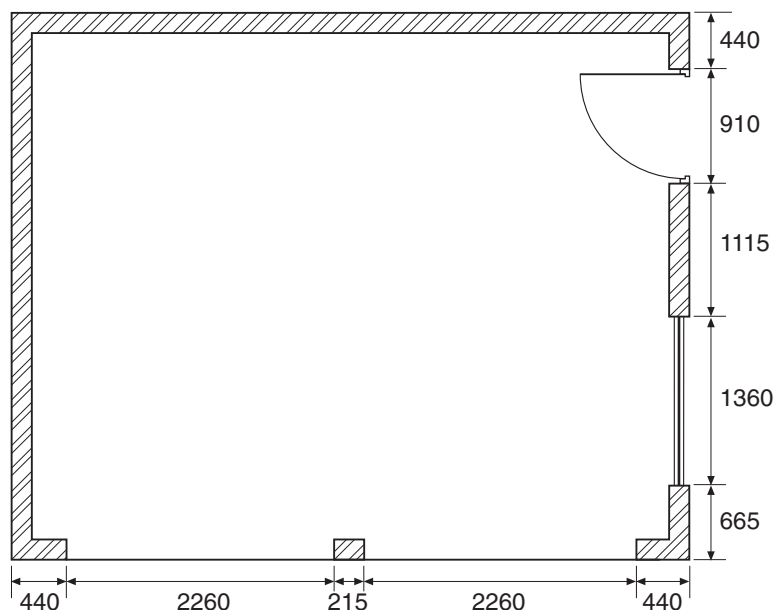
Understanding plans and working drawings is an important skill for all areas of construction. Drawings provide each trade with the necessary information to plan their work and work out what materials are needed for the job.

In this assignment you will read plans and drawings and work out quantities for some of the materials. You will need to complete parts A–D.

- A** Use information from a drawing to work out the size of the raft foundation.
- B** Read a label to work out the materials required for the job.
- C** List the storage requirements for the materials required for the job.
- D** Work out the time required for the concrete to set.

### PART A

The double garage in this drawing requires a 0.5 m thick raft foundation. Work out how much concrete to order.



Detached double garage  
For Mr and Mrs GL Lord  
Blossom Cottage  
Much Kingly  
Architect: William Hatcher

#### Remember!

All the measurements in the drawing are in millimetres.

#### Tip

Think carefully about all the stages you need to go through before you do the calculation to work out how much concrete to order.

## PART B

- 1 At midday, you take a phone call from the ready-mix concrete company to say that they will not be able to deliver the concrete that was ordered. Write a note to your boss, Mr Finch, to let him know about the situation so that he can deal with it when he gets back from lunch.



- 2 If ready-mix concrete is not available, you will have to mix the concrete yourself. Use the cement label in the Source material to work out how much sand and gravel you would need for every 25 kg of general purpose concrete you make.

## PART C

- 1 Make a list of the on-site storage requirements for the cement, sand and gravel. Use the storage procedure from your own workplace or the The Bright Building Company Company Guidelines from the Source material to help you.
- 2 Explain the storage requirements to a colleague or teacher.

## PART D

It is vital that the blockwork is started by the next day at the latest.

- 1 If you mix the first batch of concrete at 1.15 pm, what time would it have its initial set? At what time would it be completely set?
- 2 What is the latest you could lay the concrete to be ready for a 7.30 am start on the blockwork the next day?

<b><u>Concrete Mix</u></b>	
<b><i>Setting times:</i></b>	
<b>Initial set:</b>	30 minutes after mixing
<b>Final set:</b>	10 hours after mixing

If you have problems with this part of the task you can look at 'Telephone calls' in Module 5: Working with others.

If you have problems with this part of the task you can look at 'Mixing materials' in Module 3: Working skills for construction, and 'Reading product labels' in Module 4: Using materials and equipment.

If you have problems with this task you can look at 'Handling and storing materials' in Module 4: Using materials and equipment.

If you have problems with this task you can look at 'Time and schedules' in Module 3: Working skills for construction.

If you have problems with this task you can look at 'Measuring length', 'Calculate with measurements', 'Volume', 'Reading floor plans' and 'Interpreting plans and drawings' in Module 3: Working skills for construction.

<b>Skills for construction Integrated assignment 2: Getting the job done</b> This assignment relates to Unit No: VR38 of the Occupational standards and practises the skills developed in the following materials for Embedded learning – Module 3: Working skills for construction, Module 4: Using materials and equipment and Module 5: Working with others.						
Part A: Use information from a drawing to work out the size of the raft foundation for it.						
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved with support
VR38.4	Comply with the given contract instructions to carry out the work efficiently to the required specification.			MSS2/L2.1 MSS1/L1.6 MSS1/L1.7 MSS1/L1.1	<ul style="list-style-type: none"> <li>Recognise and use common 2-D representations of 3-D objects.</li> <li>Add and subtract common units within the same system.</li> <li>Convert units of measure in the same system.</li> <li>Work out simple volume.</li> </ul>	
Part B: Work out quantities.						
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved with support
VR36.2	Select the required quantity and quality of resources for the methods of work.			Wt/L1.2 Wt/L1.5 Rt/L1.3 Rt/L1.4 Rt/L1.5 N1/L1.7	<ul style="list-style-type: none"> <li>Judge how much to write and the level of detail to include.</li> <li>Use format and structure for different purposes.</li> <li>Identify the main points and specific detail, and infer meaning from images which is not explicit in the text.</li> <li>Use organisational and structural features to locate information.</li> <li>Use different reading strategies to find and obtain information.</li> <li>Work out simple ratio and direct proportion.</li> </ul>	

Part C: Read product labels.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR03.4	Handle and store occupational resources to meet product information and/or organisational requirements relating to ...			Wt/L1.2 Wt/L1.5 Rt/L1.4 Rt/L1.5 Rt/L1.1 SLc/L1.3	<ul style="list-style-type: none"> <li>Judge how much to write and the level of detail to include.</li> <li>Use format and structure to organise writing for different purposes.</li> <li>Use organisational and structural features to locate information.</li> <li>Use different reading strategies to find and obtain information.</li> <li>Trace and understand the main events of continuous explanatory texts.</li> <li>Express clearly statements of fact, explanations, instructions, accounts and descriptions.</li> <li>Present information and ideas in a logical sequence and include detail and develop ideas where appropriate.</li> </ul>		
Part D: Write an invoice.							
NOS/NVQ refs	Performance criteria	Achieved	Achieved with support	Core curriculum refs	Core curriculum elements	Achieved	Achieved with support
VR36.5	Complete the work within the allocated time, in accordance with the programme of work.			MSST/L1.3	<ul style="list-style-type: none"> <li>Calculate using time</li> </ul>		
<b>Key Skills:</b> Successful completion of this assignment will cover the following Key Skills: Parts B and C – Level 1 C1.2 Read and obtain information ... Parts A and D – Level 1 N1.2 Carry out and check calculations ...							

# Mapping information chart for Integrated assignments 1 and 2

Adult Core Curriculum	Key Skills	National Occupational Standards/NVQ
SLc/L1.2, SLc/L1.3, SLd/L1.1 SLc/L2.4  Rt/L1.1, Rt/L1.3, Rt/L1.4 Rt/L1.5  Rt/L2.2  Wt/L1.2, Wt/L1.5  Wt/L2.2, Wt/L2.3, Wt/L2.4  Wt/L2.6  N1/L1.7  MSS1/L1.1, MSS1/L1.3 MSS1/L1.6, MSS1/L1.7 MSS2/L2.1  HD1/E3.4	C1.2, C1.3 C2.1b, C2.2, C2.3  N1.2	VR01 Conform to general workplace safety  VR03 Move and handle resources  VR36 Prepare and mix concrete and mortars  VR38 Contribute to setting out basic masonry structures

# Source material

## Contents

Card activity (1) (1:1–1:4)	0:01
Card activity (2) (1:1–1:4)	0:02
Did you know? (1:1–1:4)	0:03
Spending on construction (1:1–1:4)	0:04
Pie charts (1:1–1:4)	0:05
Bar charts (1:1–1:4)	0:06
Trades and professions (1:5–1:6)	0:07
Job descriptions (1:5–1:6)	0:08–0:09
Section through a house (1:7–1:8)	0:10
Sources of information (1:14–1:15)	0:11
Research record (1:14–1:15)	0:12
Cut and stick safety signs and symbols (2:1–2:2)	0:13
Hazard cards (2:3–2:4)	0:14
Injury cards (2:3–2:4)	0:15
Solution cards (2:3–2:4)	0:16
Risks checklist (2:3–2:4)	0:17
Completed risks checklist (2:3–2:4)	0:18
Stepladder risks checklist (2:3–2:4)	0:19
Ladder safety guide (2:8–2:9)	0:20
Load lifting guide (2:8–2:9)	0:21

Injury statistics table (2:10–2:12)	0:22
Injury statistics bar chart (2:10–2:12)	0:23
Fatal injuries pie chart (2:10–2:12)	0:24
Accident record form (2:13–2:15)	0:25
CSCS booklet contents page (2:16–2:17)	0:26
CSCS booklet – page 6 (2:16–2:17)	0:27
CSCS booklet – page 7 (2:16–2:17)	0:28
Plans and drawings (3:19–3:20)	0:29
Garage at 7 Oakwood Lane (4:3–4:4)	0:30
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Instructions A–D (2)	0:35
Body language 1 (5:5–5:8)	0:36
Body language 2 (5:5–5:8)	0:37
Telephone message (5:9–5:12)	0:38
Blank telephone message (5:9–5:12)	0:39

# Card activity (1)

(A)

Thousand 1	Thousand 2	Thousand 3	Thousand 4	Thousand 5	Thousand 6
Thousand 7	Thousand 8	Thousand 9	Hundred 1	Hundred 2	Hundred 3
Hundred 4	Hundred 5	Hundred 6	Hundred 7	Hundred 8	Hundred 9
Tens 1	Tens 2	Tens 3	Tens 4	Tens 5	Tens 6
Tens 7	Tens 8	Tens 9	Ones 1	Ones 2	Ones 3
Ones 4	Ones 5	Ones 6	Ones 7	Ones 8	Ones 9
0	0	0	0	0	0

## Card activity (2)

(B)

--	--	--	--

(C)

Nine thousand and twenty-seven	Nine thousand two hundred and seventy
Nine thousand two hundred and seven	Nine hundred and twenty-seven
1 0 4 5	1 4 5 0
1 4 0 5	1 4 5
5 0 3 2	5 3 0 2
5 3 2 0	5 3 2

## Did you know?

The use of wood in the construction industry has increased by 700 000 cubic metres since 2000.

**About £60 billion is spent on construction each year.**

In 2002 there were around 1 869 000 jobs in construction in the UK.

*There are over 600 000 self-employed construction workers.*

Over the next four years, the construction industry will need 83 000 new workers.

*The roof structure of the new Wembley stadium will weigh over 7000 tonnes.*

In 2001, orders worth £239 million were awarded to contractors in the county of Shropshire alone.

**The floor area of the Wales Millennium Centre in Cardiff is 33 000 square metres.**

**The Selfridges building in Birmingham is clad with 16 000 spun aluminium discs.**

The 102-metre high viewing cabin on the Glasgow Science Centre offers 20-mile views over the city.

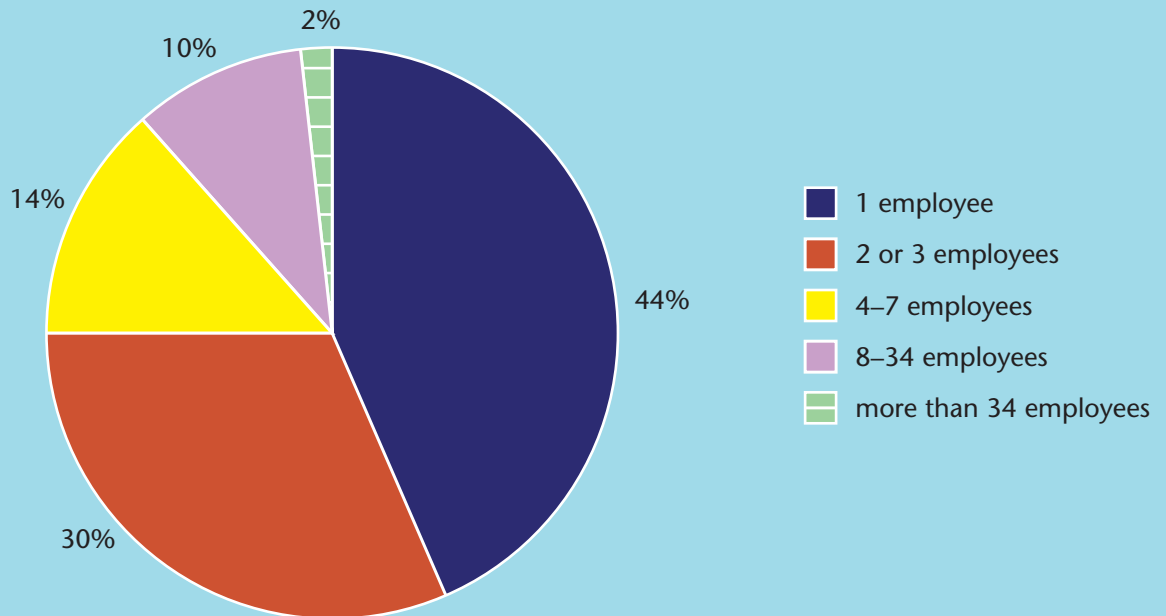
Average wages and salaries in the construction industry increased by 8.1% in 2004.

# Spending on construction

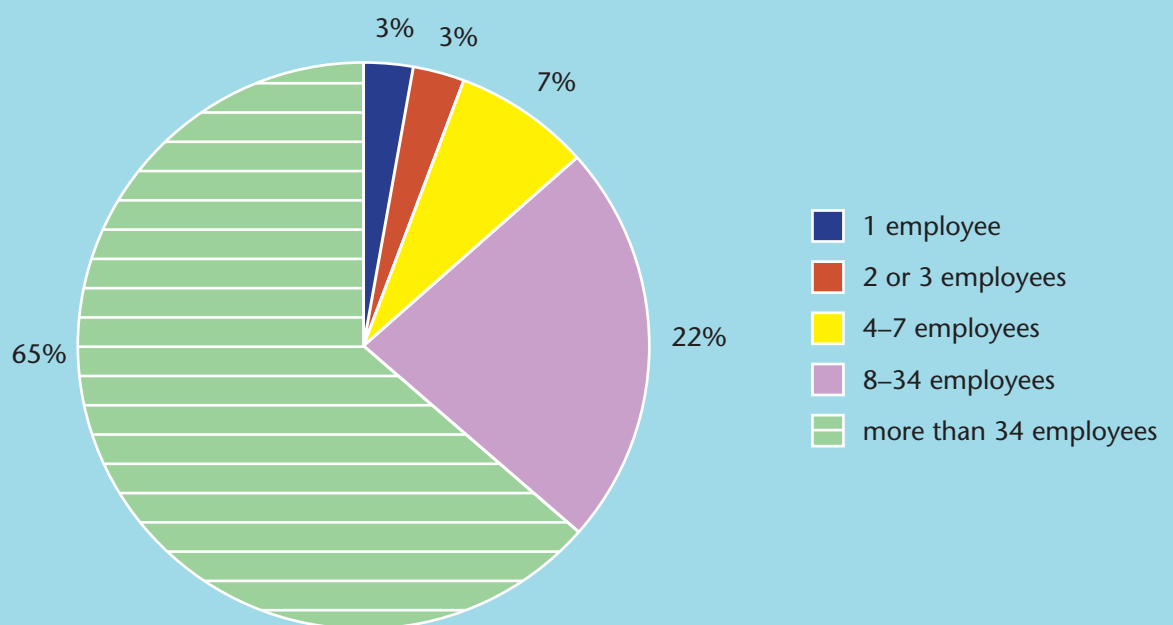
Spending on construction in Great Britain		
	New construction	
	2002 £ million	2003 £ million
Public housing	1668	2009
Other public work	6148	8782
Infrastructure	7997	7270
Private housing	9624	13 183
Private industrial	3351	3603
Private commercial	14 960	14 930
Total	<b>43 748</b>	<b>49 777</b>
	Repair and maintenance	
	2002 £ million	2003 £ million
Public housing	6217	7490
Other public work	6530	7867
Private housing	12 698	13 953
Other private work	12 211	13 567
Total	<b>37 656</b>	<b>42 877</b>
<b>Total spending</b>	<b>81 404</b>	<b>92 654</b>

# Pie charts

**Number of people employed by construction firms in Great Britain in 2002**

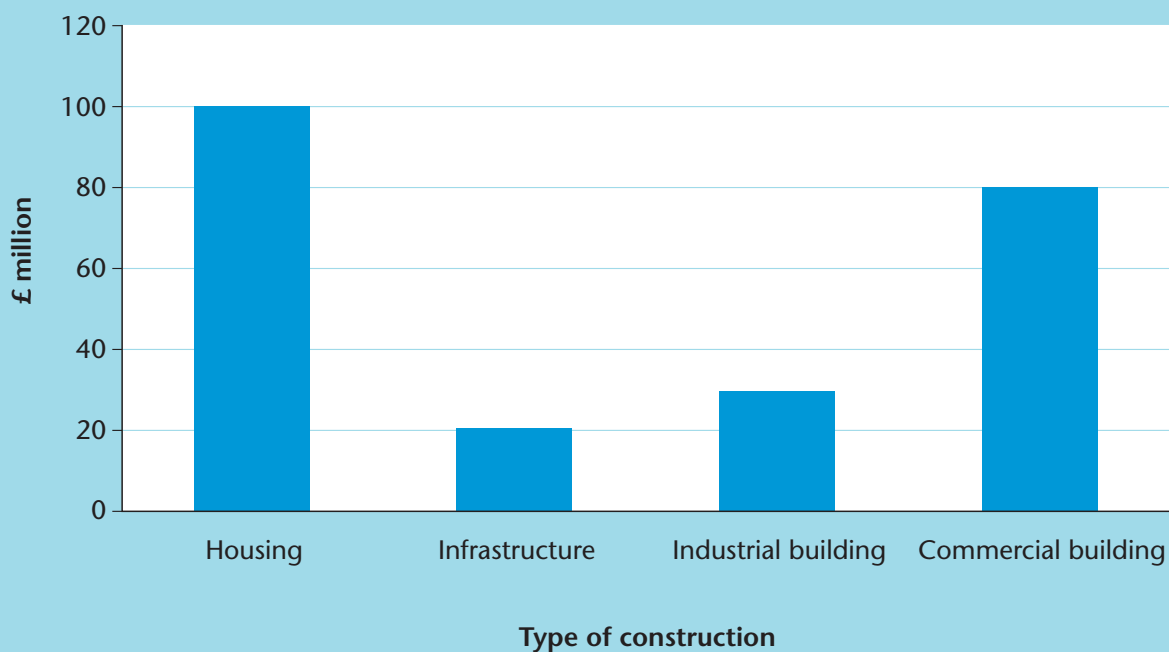


**The amount of construction work done in Great Britain in 2002 by the size of the firm**

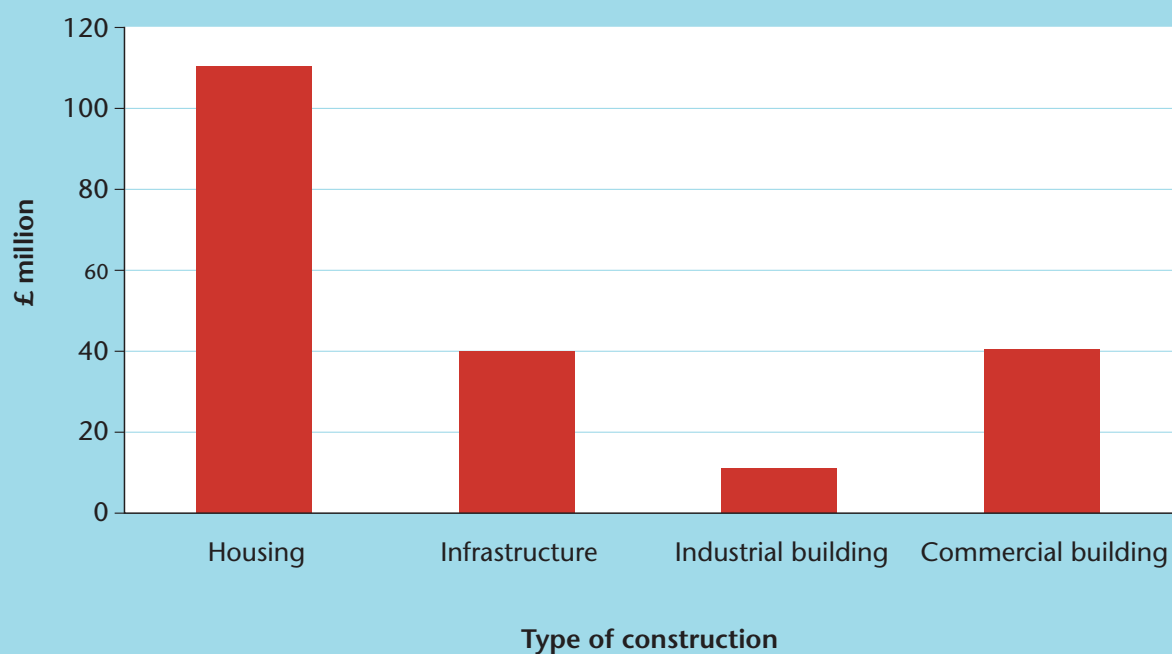


# Bar charts

The value of new orders awarded to contractors in one English county in 2003



The value of new orders awarded to contractors in one English county in 2001



# Trades and professions

wall and floor tiler	glazer	painter	site manager	form worker
shopfitter	plant operator	demolition operative	stonemason	bricklayer
joiner	plasterer	electrician	steeplejack	plant mechanic
conservation officer	plumber	estimator	carpenter	architectural technician
housing layout designer	bench joiner	project planner	quantity surveyor	heritage building inspector
roof tiler and slater	road construction operative	architect	scaffolder	concrete finisher
building services engineer	civil engineer	structural engineer	site technician	building control officer

# Job descriptions

## Demolition Operative

### THE WORK

- Demolish and dismantle structures:
  - by hand
  - using heavy plant machinery
  - using explosives

### HOURS AND ENVIRONMENT

- Basic 39-hour week but weekend work and overtime often required.

### SKILLS AND INTERESTS

- responsible attitude to safe working practices
- physically fit
- comfortable working at heights
- good manual skills for operating tools and equipment
- able to work as part of a team

### ENTRY

- no formal qualifications
- over 18

### TRAINING

- Provided on the job.
- Can work towards NVQ in Demolition (Construction) Levels 2 and 3.

## Road Construction Operative

### THE WORK

- Help build new roads and maintain existing ones.
- Maintain roadside verges and central reservations.
- Set up warning signs and cones and manage pedestrians and traffic close to the site.

### HOURS AND ENVIRONMENT

- Basic 37-hour week with early starts.
- Overtime during evenings, nights and weekends is common.
- Work is noisy, dirty and physically demanding.
- Can involve short or long periods away from home.

### SKILLS AND INTERESTS

- physically fit
- good practical ability
- able to follow written and verbal instructions
- able to work as part of a team
- aware of health and safety issues

### ENTRY

- No set entry requirements.

### TRAINING

- Provided on the job.
- Can work towards NVQ in Construction and Civil Engineering Services – Highways Maintenance Levels 1 & 2 or NVQ in Construction and Civil Engineering Services (Road Building) Level 2.

## Construction Plant Operator

### THE WORK

- Control and operate machines used on construction sites and roadworks.
- Change attachments.
- Maintain equipment / carry out safety checks.

### HOURS AND ENVIRONMENT

- 39-hour week but times may vary to meet deadlines. Unsocial hours are common.
- Outdoor in all weathers.
- Dusty, dirty, noisy conditions – some work at heights.
- Can involve travel locally or further afield.

### SKILLS AND INTERESTS

- full driving licence
- good eyesight, hearing and concentration
- good basic knowledge of motor mechanics
- able to follow detailed instructions
- physically fit

### ENTRY

- No set academic entry requirements.
- Must be at least 18.

### TRAINING

- On the job, or day- or block-release at local college or training provider.
- Can work towards NVQ in Specialised Plant and Machinery Operations (Construction) Levels 1 and 2.

## Architectural Technician

### THE WORK

- Use computer-generated drawings to prepare the information needed for a construction job.

### HOURS AND ENVIRONMENT

- 35-hour week Monday to Friday.
- Mostly office work.
- Some work in the field.

### SKILLS AND INTERESTS

- enjoy working with computers
- good communication skills
- interest in Art and Design
- good understanding of construction methods and processes

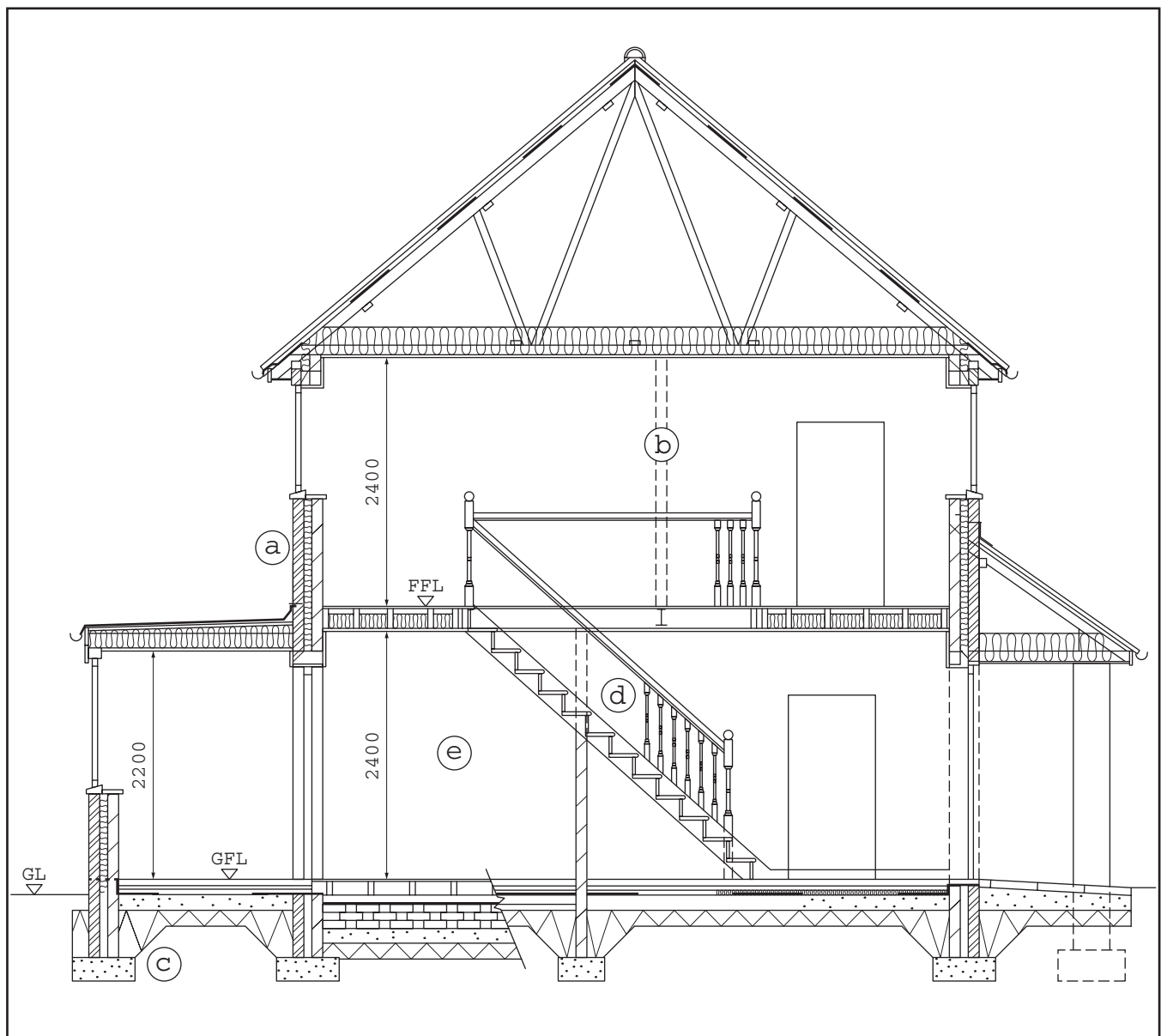
### ENTRY

- 4 GCSEs (A–C)

### TRAINING

- On the job, and day- or block-release at local college or training provider with workplace assessments.
- Can work towards BTEC NC, HNC or HND in construction.
- As an operative, can then train as an engineering technician and work towards NVQ Level 3 CAD Operation or City and Guilds Certificate.

# Section through a house



# Sources of information

## Websites

[www.foe.co.uk/campaigns/transport/issues/road\\_building/](http://www.foe.co.uk/campaigns/transport/issues/road_building/)

[www.nottingham.ac.uk/transportissues/road\\_benefits.shtml](http://www.nottingham.ac.uk/transportissues/road_benefits.shtml)

[www.transport2000.org.uk/communityaction/stop](http://www.transport2000.org.uk/communityaction/stop)

[www.bbc.co.uk](http://www.bbc.co.uk)

[www.britannica.com](http://www.britannica.com)

[www.builderandengineer.co.uk](http://www.builderandengineer.co.uk)

[www.rics.org/Builtenvironment/Sustainableconstruction/demolition\\_waste.htm](http://www.rics.org/Builtenvironment/Sustainableconstruction/demolition_waste.htm)

## Books

*DTLR/CIRIA Recycled Construction Materials Handbook*

*The Construction Industry Council Guide on Reclaimed Materials*

## Addresses

Construction Industry Council

26 Store Street

London WC1E 7BT

The National Federation of Demolition Contractors Ltd

Resurgam House

1A New Road

The Causeway

Staines

TW18 3DH

The Construction Industry Research and Information Association (CIRIA)

Classic House

174–180 Old Street

London

EC1V 9BP

The Royal Institute of Chartered Surveyors

12 Great George Street

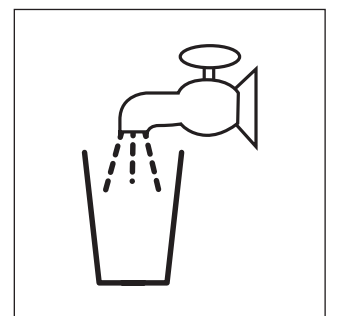
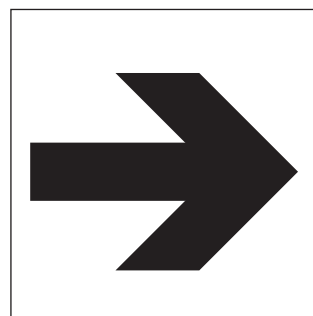
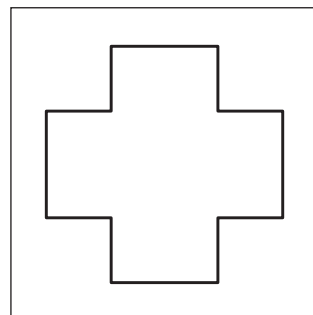
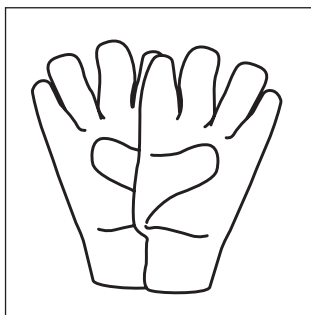
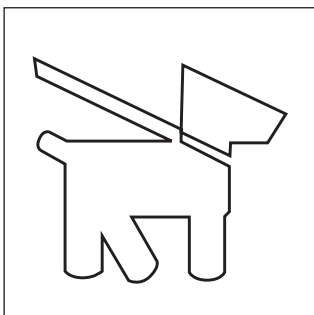
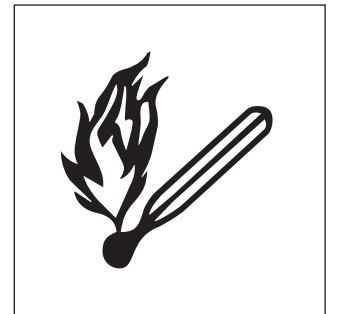
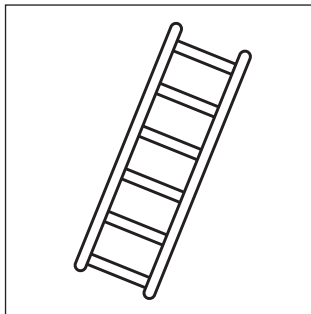
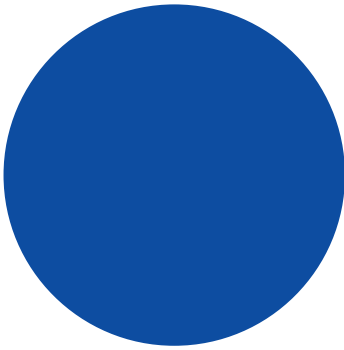
Parliament Square

London SW1P 3AD

# Research record

Information source (website, magazine, journal, book, newspaper, etc.)	What was in it?	Tick if used

# Cut and stick safety signs and symbols



## Hazard cards

Hazard <b>Missing safety equipment</b>	Hazard <b>Fire risk</b>	Hazard <b>Faulty equipment</b>	Hazard <b>Unstable equipment or materials</b>
Hazard <b>Falling objects or tools</b>	Hazard <b>Poor house- keeping</b>	Hazard <b>Restricted space</b>	Hazard <b>Bad weather conditions</b>
Hazard <b>Poor lighting</b>	Hazard <b>Confined space</b>	Hazard <b>Lifting materials</b>	Hazard <b>Access and exit</b>
Hazard <b>Disposal of waste</b>	Hazard <b>Working at height</b>	Hazard <b>Noise pollution</b>	Hazard <b>Strong chemicals</b>

## Injury cards

Injury  Slip	Injury  Trip	Injury  Fall	Injury  Crushing injury
Injury  Electric shock	Injury  Cut	Injury  Head injury	Injury  Sickness or poison
Injury  Breathing problem	Injury  Burn or scald	Injury  Skin or eye irritation	Injury  Hearing damage
Injury  Muscle strain			

## Solution cards

Solution  Use fall protection	Solution  Wear a hard hat	Solution  Use a safety harness	Solution  Use lifting aids
Solution  Check tools and materials for damage	Solution  Put up warning signs	Solution  Tape off area	Solution  Wear eye, ear, hand or foot protection
Solution  Ventilate the area	Solution  Use fire-fighting equipment	Solution  Work in an area with washing facilities	Solution  Make sure area is clean and tidy
Solution  Check safety barriers are in place	Solution  Keep away from the edge	Solution  Check the waste disposal system	Solution  Follow route marked on permit

# Risks checklist

## Using moveable scaffolding – possible risks checklist

Step 1 What are the hazards?	Step 2 What type of injury or accident might occur?	Step 3 Who is at risk?	Step 4 What can be done?
working at height	fall	workers	<ul style="list-style-type: none"> <li>● use fall protection</li> <li>● use a safety harness</li> </ul>
falling material or tools	head injury	anyone walking below	<ul style="list-style-type: none"> <li>● wear hard hats on site</li> <li>● put up warning signs</li> <li>● tape off area</li> </ul>

# Completed risks checklist

## Using moveable scaffolding – possible risks checklist

Step 1 What are the hazards?	Step 2 What type of injury or accident might occur?	Step 3 Who is at risk?	Step 4 What can be done?
working at height	fall	workers	<ul style="list-style-type: none"> <li>● use fall protection</li> <li>● use a safety harness</li> </ul>
falling material or tools	head injury	anyone walking below	<ul style="list-style-type: none"> <li>● wear hard hats on site</li> <li>● put up warning signs</li> <li>● tape off area</li> </ul>
using scissor-lift to get materials up	<ul style="list-style-type: none"> <li>● damage to site equipment</li> <li>● personal injury</li> <li>● gas release</li> </ul>	workers	<ul style="list-style-type: none"> <li>● follow route marked on permit</li> <li>● protect site equipment</li> <li>● don't overload</li> <li>● carry gas monitor</li> </ul>
poor housekeeping	trip, slip or fall	workers	<ul style="list-style-type: none"> <li>● keep area tidy</li> <li>● remove wastage regularly</li> </ul>

# Stepladder risks checklist

## Using a stepladder when removing a window on a town house – possible risks checklist

Step 1 What are the hazards?	Step 2 What type of injury or accident might occur?	Step 3 Who is at risk?	Step 4 What can be done?

# Ladder safety guide

## LADDER SAFETY

### General ladder safety

Ladders should be in **good condition** and examined regularly for defects. They should be **secured** so they cannot slip. The ladder should be **angled** to minimise the risk of slipping outwards (one out for every four up).

### Access ladders

These should extend about 1 m above the working platform to provide a handhold for people getting on and off.

### You must

- 1 Only use ladders for light work of short duration if there's no safer alternative.
- 2 Angle and secure them to prevent slipping (one out for four up).
- 3 Always make sure ladders are properly maintained.

### Don'ts

- Do not overreach – ladders must be long enough.
- Do not climb or work off a ladder unless you can hold on to it.



**NEVER OVERREACH**

### THE RIGHT AND WRONG WAYS TO WORK

#### The right way ✓

- ✓ right height
- ✓ good grip
- ✓ stand-off used
- ✓ clean steps
- ✓ ladders overlap by at least three rungs
- ✓ ladder undamaged
- ✓ ladder held in position to stop it slipping
- ✓ ladder has non-slip feet
- ✓ ladder at correct angle
- ✓ firm and level base



#### The wrong way ✗

- ✗ electrical hazard
- ✗ overhead hazard
- ✗ overreaching
- ✗ no grip on ladder
- ✗ long length of material
- ✗ standing on top three rungs
- ✗ ladder overlaps by only one rung
- ✗ slippery steps
- ✗ damaged rail and rung
- ✗ non-slip foot missing
- ✗ unstable surface
- ✗ base too far from wall

# Load lifting guide

## LIFTING LOADS SAFELY

### Checks before you start

#### The load

When you are going to lift a load by hand you need to think about any potential problems.

Think about whether the load is **heavy**, **bulky** or **awkwardly shaped**. It might be **difficult to grasp** or **unstable**, tending to wobble about. It might be **harmful**. For example, it might have sharp corners.

*If any of these things are true, consider which is the safest way to lift it.*

#### The environment

The following things need to be taken into account when planning the lift.

- Are the floors in good condition?
- Is there any variation in levels, such as steps or ramps?
- Is there enough room?
- Is the lighting adequate for the purpose?
- Is the temperature particularly hot or cold?
- Are there strong air movements?
- Are there any restrictions on movement due to clothing or protective equipment?

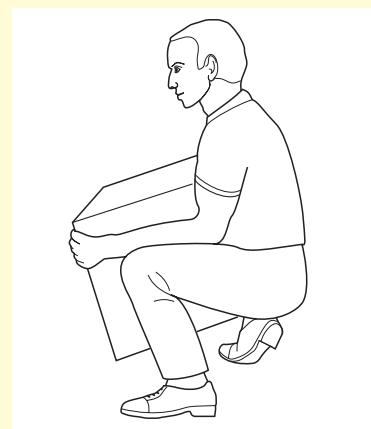


**BE SAFE – USE LIFTING AIDS WHERE PROVIDED**

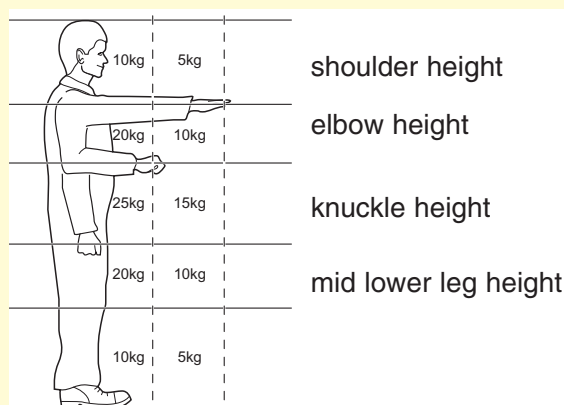
### MANUAL HANDLING GUIDELINES

#### Correct lifting position

- Chin tucked in
- Comfortably straight back
- Leaning slightly forward
- Arms close to body
- Secure grip
- Bent knees
- Proper foot position



#### Guideline maximum weight for lifting and lowering



#### Do

- ✓ plan the lift
- ✓ use appropriate handling aids if possible
- ✓ get help with the load if possible
- ✓ remove obstructions
- ✓ consider resting the load midway for a long lift.

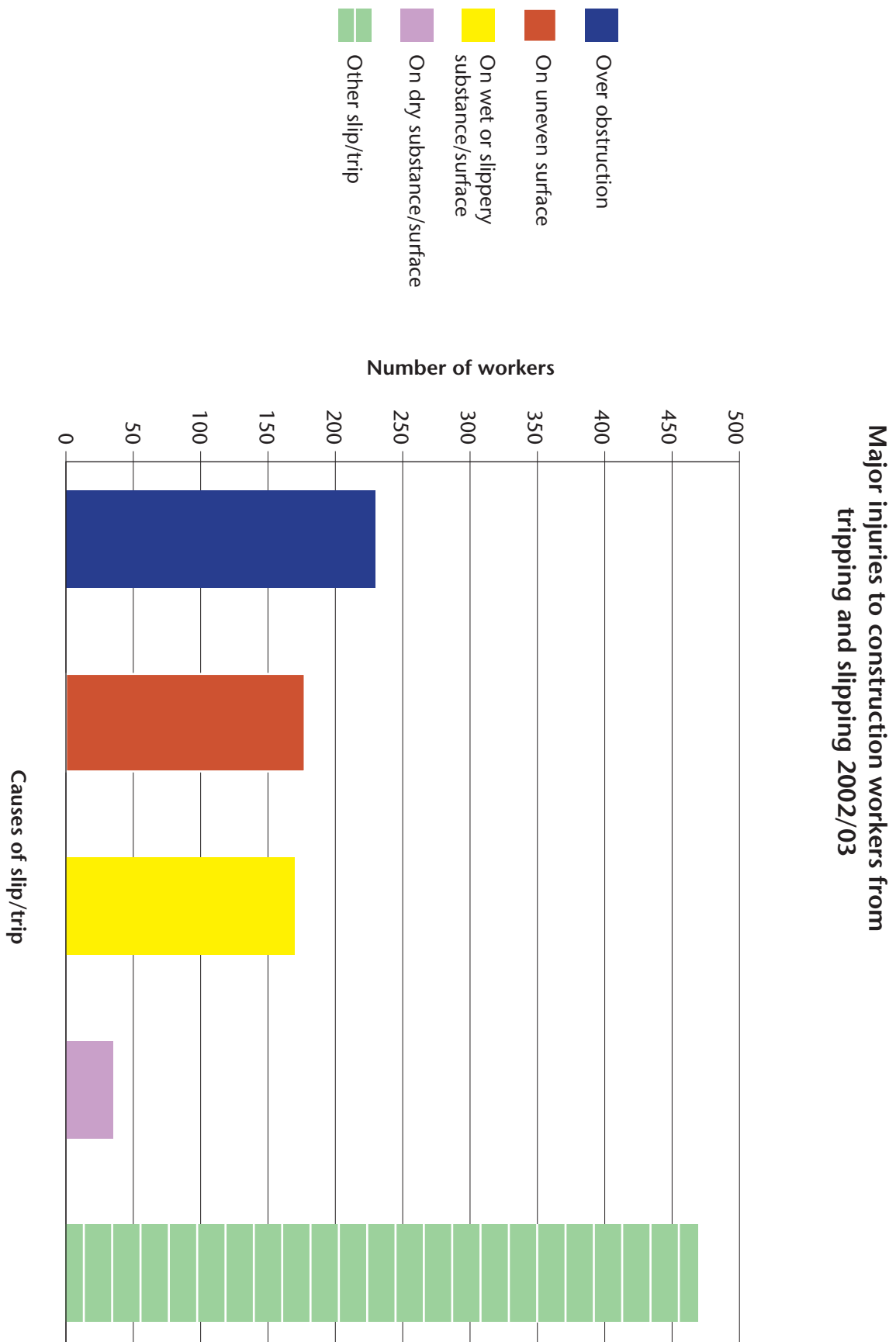
#### Do not

- ✗ kneel or over-flex the knees
- ✗ jerk the body
- ✗ twist the body
- ✗ lift too many items in one go
- ✗ lift sharp items without hand protection
- ✗ lift anything too high to see over.

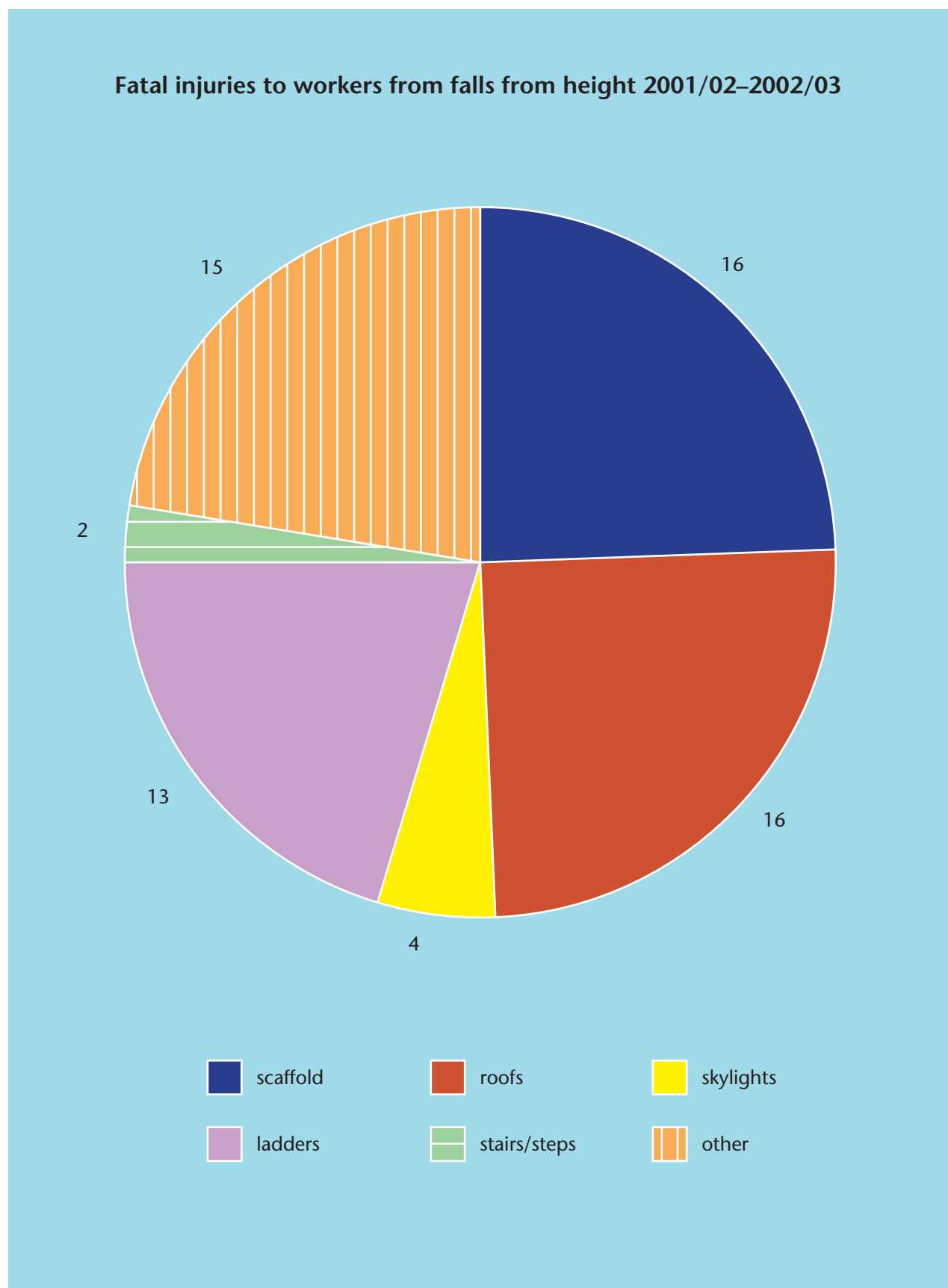
# Injury statistics table

JBJ ROBERTS CONSTRUCTION CO. LTD	
Approximate number of injuries to parts of the body per year in the construction industry	
Injured body part	Approximate number of people injured
back (strain)	24
leg, ankle or foot	21
hand or arm	13
thumb or finger	11
face/head	5
shoulder	4
eye	4
ribs	2
other	16

# Injury statistics bar chart



# Fatal injuries pie chart



# Accident record form

ACCIDENT RECORD	
<b>1 About the person who had the accident</b>	
Name _____	
Address _____	
_____	Postcode _____
Occupation _____	
<b>2 About you, the person filling in this record</b>	
If you did not have the accident, write your address and occupation.	
Name _____	
Address _____	
_____	Postcode _____
Occupation _____	
<b>3 About the accident</b> <i>Continue on the back of this form if you need to.</i>	
Say when it happened. Date ____ / ____ / ____ Time _____	
Say where it happened. State which room or place. _____	
_____	
Say how the accident happened. Give the cause if you can. _____	
_____	
_____	
_____	
If the person who had the accident suffered an injury, say what it was. _____	
_____	
Please sign and date the record.	
Signature _____	Date ____ / ____ / ____
<b>4 For the employer only</b>	
Complete this box if the accident is reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)	
How was it reported? _____	
Date reported ____ / ____ / ____	Signature _____

# CSCS booklet contents page

## Contents

---

- 1** Introduction
  - 2** Aims of the Scheme
  - 3** Benefits
  - 4** Scope
  - 5** Membership
  - 6** Health and Safety Requirements
  - 7** Transition Period
  - 8** Skilled Card – The NVQ and SVQ Route
  - 9** Skilled Card – Apprenticeship Route
  - 10** Skilled Card – Industry Accreditation Route
  - 11** Skilled Card – Plant Operators Only
  - 12** Skilled Card – Experienced Worker Route
  - 13** Skilled Card – NVQ or SVQ Unit Route
  - 14** Construction Related Occupations – Not Covered by CSCS
  - 15** Trainee Card
  - 16** Construction Site Operative Card
  - 17** Technical, Supervisory and Management Cards
  - 18** Visitors Card
  - 19** Occupations Open for CSCS Cards
  - 20** Application Procedure
  - 21** Ownership and Withdrawal of Cards
  - 22** Renewals
  - 23** Appeals Procedure
  - 24** Updates and Lost Cards
  - 25** Fees
  - 26** Data Protection
  - 27** Promotional and Scheme Literature
  - 28** CSCS Certificate of Commitment
  - 29** Further Information
- 
- Appendix A: CSCS Cards
- Appendix B: Health and Safety Awareness
- Appendix C: List of CSCS Approved Registration Bodies
- Appendix D: CSCS Application Form
- Appendix E: Availability of Occupations for CSCS Cards  
(Craft and Operative level)
- Appendix F: Availability of Occupations for CSCS Cards  
(Technical, Supervisory and Management level)
- Appendix G: Affiliated Schemes
- Appendix H: Construction Plant Competence Scheme (CPCS) Categories

# CSCS booklet – page 6

## 3 BENEFITS

**3.1** The Scheme aims to provide the following benefits to individuals:

- recognition of skills, competence, and qualifications
- improved health and safety awareness
- improved employment prospects
- identification of training needs to improve or update skills.

**3.2** The Scheme aims to provide the following benefits to employers:

- identification of operatives, supervisors and managers with recognised skills, competence and qualifications
- better quality of work
- improved health and safety awareness among the workforce
- identification of training needs to improve or update skills
- a move towards a qualified workforce, which will help to improve customer satisfaction and the industry's image.

## 4 SCOPE

**4.1** The Scheme does not seek to duplicate other certification schemes for specific occupations. Instead, these schemes may merge with CSCS but this can only happen if both schemes agree on the terms and standards.

**4.2** The Scheme covers a diverse range of construction occupations in building, civil engineering and allied industries.

# CSCS booklet – page 7

## 5 MEMBERSHIP

**5.1** Scheme membership is confirmed through the issue of a registration card.

**5.2** A range of cards is available:

- A trainee card is available for those who are registered for an NVQ or SVQ Level 2 or 3 but who have not yet achieved the qualification. It is now also extended to cover trainee supervisors and managers.
- By achieving an NVQ or SVQ level 1, 2, 3, 4, or 5.
- Completing an indentured apprenticeship or employer-based apprenticeship and supplying appropriate documents.
- Industry accreditation, which is only available for a limited time (this is now closed for many occupations).
- The experienced worker route.
- The experienced technical, supervisor or manager route.
- The professional membership route.

The rules are explained in paragraphs 8 to 18. Pictures of the cards are at Appendix A.

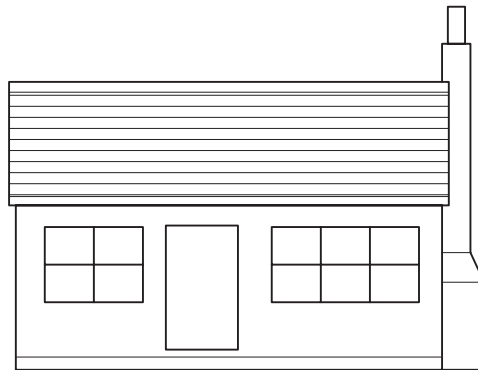
## 6 HEALTH AND SAFETY REQUIREMENTS

**6.1** All applicants must pass the construction health and safety test at the appropriate level; operative, supervisor or manager no more than two years before applying for the card (See Appendix E or F for details). There are exemptions to this rule:

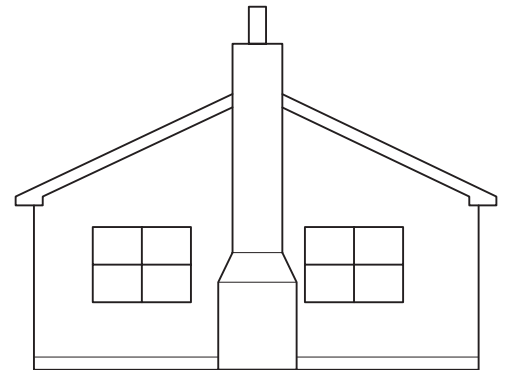
- Achievement of a construction NVQ, SVQ, ICC (Intermediate Construction Certificate) or ICA (Intermediate Construction Award).
- Achievement of NVQ unit 50 or Construction Certificate module 2.
- A Site Management Safety Training Scheme (SMSTS) certificate (including the two-day refresher course).
- National Examination Board of Occupational Safety and Health (NEBOSH) Construction Certificate.

# Plans and drawings

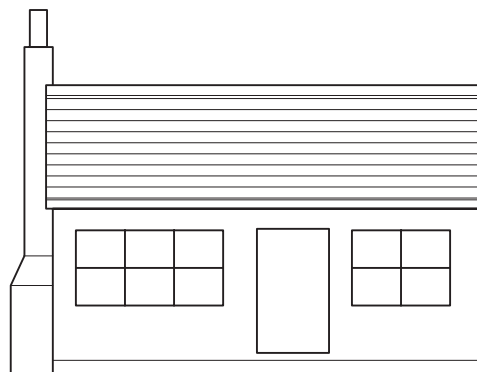
## Elevations



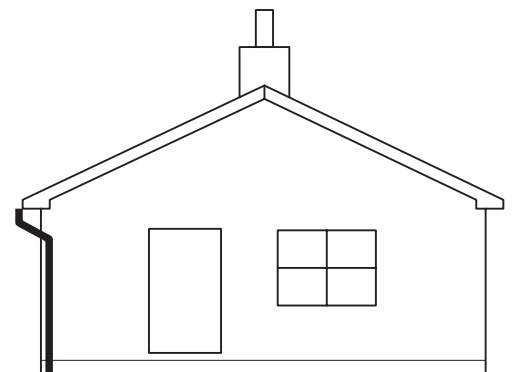
Rear elevation



Left side elevation

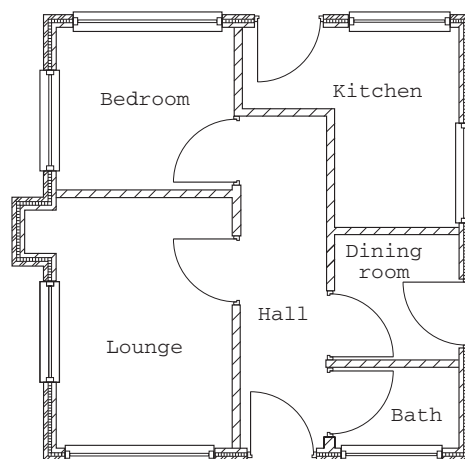


Front elevation

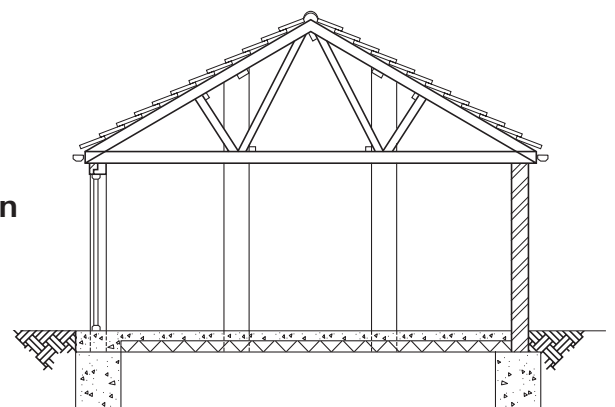


Right side elevation

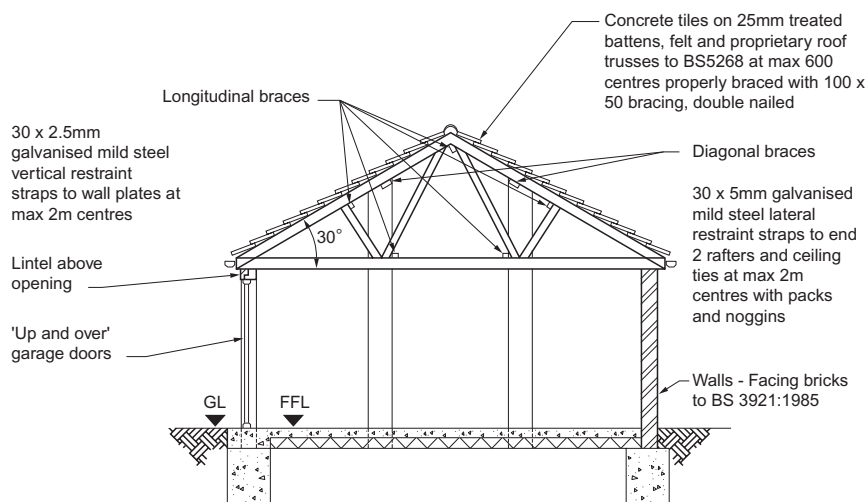
## Floor plan



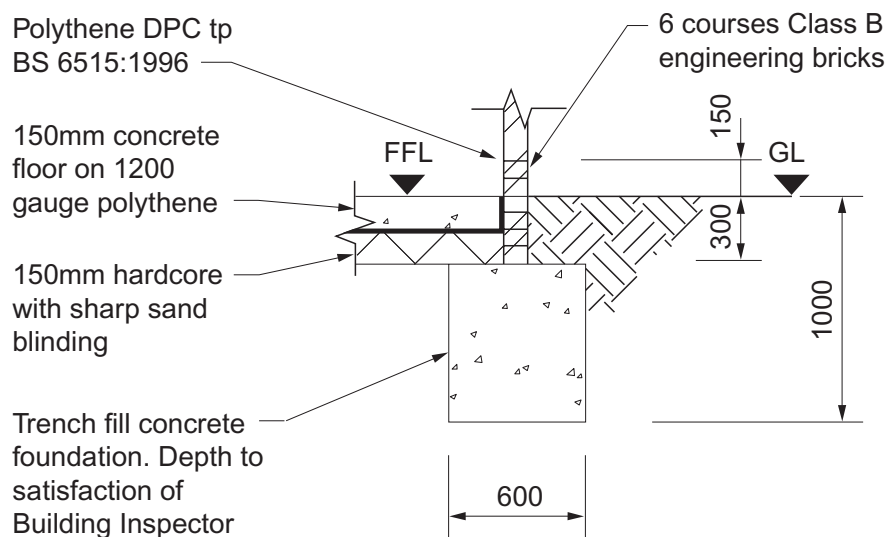
## Cross-section of a garage



# Garage at 7 Oakwood Lane



Section A - A



Section Through Foundation

Rev:	Description:	Date:
Client:	Mr R Green	
Job:	Proposed Detached Garage / Workshop for Plot 7, Oakwood Lane	
Drawing title:	Sections	
Scale:	Not to scale	Date: April 2005
Drawing No:	38	2

# Storage guidelines

# BBC

## The Bright Building Company

### STORAGE GUIDELINES

#### Storage of materials

Store all materials and components on flat surfaces.

#### Cement

- Use in strict rotation. Remember: 'first in, first out'.
- Handle bags with care to avoid splitting the paper.
- During storage, cement **must** be kept dry. Do not allow it to become damp as it will set.
- If possible, store in a well-ventilated room.
- When stored outdoors, cover with a plastic sheet.
- Always store off the ground on a pallet.
- To make them easy to reach and prevent compacting, bags should never be stacked more than 10 bags high and the stack should be bonded to prevent it from falling over.

#### Bricks

Loose bricks should be stacked, dry bonded, to avoid the stack collapsing.



#### Sheet materials

(e.g. plasterboard, plywood)

- Store in warm, dry place.
- Stack flat on timber cross bearers.
- If stored on edge, use vertical racks.
- Never lean against a wall.

#### Lengths of timber

- Store horizontally, off ground.
- Use cross bearers to allow air to circulate.
- Protect timber against the weather. Use covered racks or cover with waterproof sheeting.

#### Materials stored in containers

(e.g. paint, glue)

- Store in dry conditions on shelves.
- Maintain an even temperature of 15°C.
- Always make sure lids are fastened securely.
- Check 'use by' dates regularly.

#### Boxed or packet items

(e.g. screws, nails)

- Store in dry conditions on shelves or racks.
- Keep dry.

#### Pipes

- Stack flat.
- Ensure bottom row is on cross bearers.
- Always place wedges or chocks against the bottom row.

# Cement label



**A superior quality product that ensures performance every time**

## USAGE INSTRUCTIONS

**1.** For mixing concrete or mortar you will need a clean flat surface, a shovel and a water supply – you may also require a wheelbarrow. For large projects a cement mixer is recommended.

**2.** An approximate mixing guide for making concrete or mortar with sand, gravels or ballast in proportion to the cement is given below.

**3. For concrete:** Mix thoroughly the sharp sand and gravel (or just ballast) together with the right proportion to the cement on the board, then make a crater in the dry pile.

**For mortar:** Mix thoroughly the building sand together with the right proportion of cement on the board, then make a crater in the dry pile.

**4.** Add water to the crater and mix thoroughly and evenly until the required consistency is reached.

**5.** Concrete hardens because cement and water react together chemically. Freshly placed concrete should be protected against strong sun, wind and rain by covering. Do not commence laying concrete in frosty conditions.

**6.** If you are laying bricks, blocks or rendering, dampen the surface to which the mortar is being applied. This will improve adhesion.

**7.** After completing the work, wash all tools with clean water.

## MIXING GUIDE

The amount of water required will vary for each type of job and material used, an approximate guide for 25 kg of Cement is 12½ – 15 Litres (suggested starting rate 10 Litres). Additional water may be added to obtain the correct consistency and workability for your job.

### TOO MUCH WATER WILL WEAKEN THE MIX.

GENERAL PURPOSE CONCRETE 1 part cement:2 parts sharp sand:3 parts gravel  
OR 1 part cement:4 parts ballast

CONCRETE PAVING/DRIVEWAYS 1 part cement:1½ parts sharp sand:2½ parts gravel  
OR 1 part cement:3½ parts ballast

MORTAR (standard mix) 1 part cement:5–6 parts building sand  
OR (strong mix) 1 part cement:3–4 parts building sand

A MORTAR PLASTICISER IS REQUIRED OR AN ALTERNATIVE 1 PART HYDRATED LIME

CEMENT BS EN197-1-CEM1 42,5N



## HEALTH AND SAFETY ADVICE

- May cause sensitisation by skin contact.
- Risk of serious damage to eyes.
- May cause irritation, dermatitis or burns.
- Avoid eye and skin contact by wearing PPE.
- Avoid breathing dust.
- On contact with eyes and skin, rinse immediately with plenty of cold water.
- Seek medical advice after eye contact.
- Keep out of the reach of children.

**PRODUCT HELPLINE**  
**0800 1234567**  
**MON-FRI 9AM-5PM**



**IRRITANT**

# Quicksett label

# QUICKSETT

Reduces setting and hardening times of mortar and concrete

LIQUID RAPID HARDENING AND PLUGGING ADMIXTURE

## DESCRIPTION

An admixture that accelerates the setting time of concrete, mortar, paving, cement renders and screeds. By reacting chemically with cement **QUICKSETT** ensures faster setting and hardening.

## DIRECTIONS

Pre-mix **QUICKSETT** with the gauging water. Check the amount of water used for mixing to ensure that the correct amount of **QUICKSETT** is added. In cold weather ensure that aggregates are free from frost and cover work as it is completed. Concrete should be used immediately, and mortar after 20 minutes of mixing.

### Watchpoints

- Do **not** use with High Alumina cement.
- Do **not** use with embedded metal.
- British Standards qualify the use of Calcium Chloride in mortars and concrete – refer to the appropriate Standards before use.
- **QUICKSETT** cannot be used in mortar for structural masonry complying with BS 5628. Consult the engineer or the appropriate British Standards Code before using in strength mixes and/or reinforced concrete.
- Use Jan Wintamix for frost protection of bricklaying mortar. (Refer to the instructions on the relevant data sheet.)

## DOSAGE

For general use a rate of 5 to 10 litres per 100 kg of cement.

## SPECIFICATION TYPE

ASTM C494: Type C

## CHLORIDE ION CONTENT

13.75% (w/w) of admixture  
0.815%–1.630% (w/w) of cement mass at recommended dosages

## STORAGE

Stir well before use. Will freeze but will reconstitute by stirring after thawing. Storage life: minimum of one year if stored at normal temperatures.

## HEALTH AND SAFETY INSTRUCTIONS

- Contains: Calcium Chloride
- Irritating to eyes and skin. Wear impervious plastic or rubber gloves and use suitable barrier cream.
- As with all chemical products, avoid contact with skin, eyes, mouth or foodstuffs (which can also be tainted with vapour).
- Wash splashes from skin and from eyes immediately with plenty of water for 10–15 minutes.
- If accidentally ingested, do not induce vomiting, give water and seek immediate medical attention.
- In the event of spillage, absorb with sand, earth or mineral absorbent and collect for approved disposal.
- Wash area with detergent and water.



**IRRITANT**

For further information contact **QUICKSETT** Technical Services or refer to the product data sheet.

**QUICKSETT** Ltd  
Rapid House Plugging Lane  
Hardenville HA6 7RD  
01234 567890

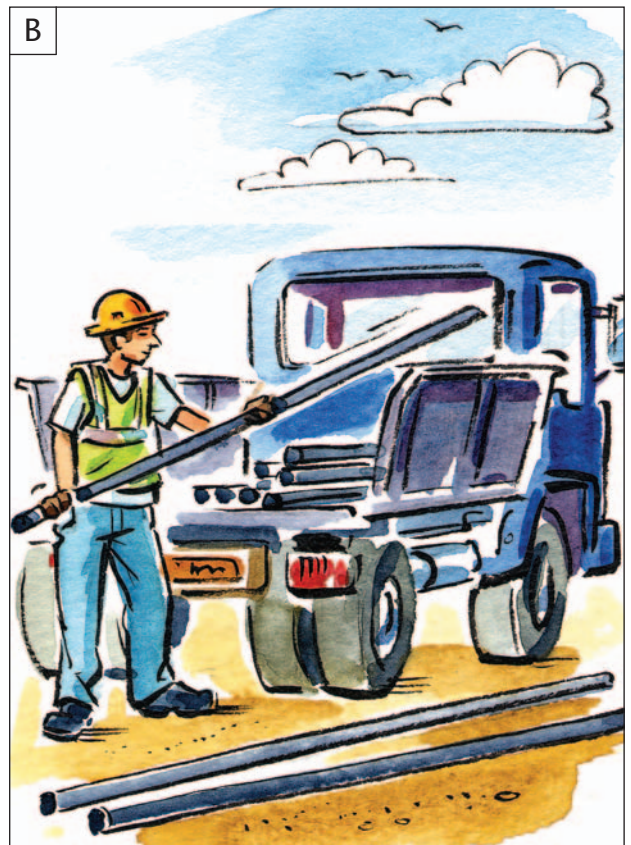


**CONTENT 5 LITRES**

# Instructions A–D (1)



## Instructions A–D (2)



# Body language (1)

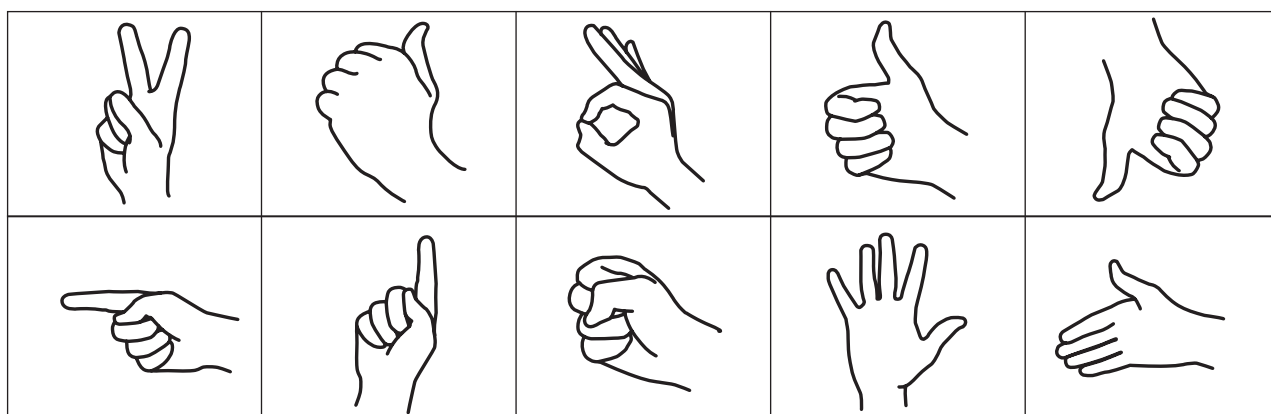
## 1 Facial expressions

Person 1's expression suggests he is angry. What do the other people's expressions suggest?



## 2 Hand gestures

What do these hand gestures mean to you?



# Body language (2)

## 3 Posture

The position of the body also gives signals to others.  
What mood do you think these people are in? Relaxed?  
Happy? Bored?



## 4 The whole picture

These apprentices are listening to a supervisor. Discuss what their body language shows.



# Telephone message

## TELEPHONE MESSAGE

To: ..... *Chris Bond* .....

From: ..... *Dave Cooper* .....

Date: ..... *12th December* .....

*Mr Jamodu from Berrisford Supplies rang to say he will be able to make the meeting on 5th January.*

*His telephone number is 01483 795002.*

# Blank telephone message

**TELEPHONE MESSAGE**

**To:** .....

**From:** .....

**Date:** .....

---

# Glossary

**abbreviation** shortened forms of written words, usually made up from the first letter or letters of words (e.g. the abbreviation for gram is 'g')

**absorb** soak up

**accelerates** makes faster

**access** way in

**adequate** good enough

**admixture** technical term for something that is mixed with something else; a material added to a mix to alter one or more of its properties

**affect** have an effect on

**aggregate** a filler material used in mortar and concrete mixes; can be fine (sand), coarse, lightweight, natural, manufactured

**angle** the measurement between two lines at the point where they meet

**applicant** the person who is applying for something (e.g. a job)

**apprenticeship** period of training in which a person learns a trade from a skilled employer or professional

**area** the measure of a flat surface; area is calculated by multiplying the length and width and is expressed in square units (e.g. square metres – m<sup>2</sup>)

**assessment** a method of judging how well a job is being done; this can include observation, questions and answers, and evidence

**ASTM** American Society for Testing Materials (abbreviation); type C covers cementitious, ceramic, concrete and masonry materials

**basic (wage)** the amount of money paid for contracted hours (money is deducted from this for tax and National Insurance Contributions; money may be added for overtime or bonuses)

**BATJIC** Building and Allied Trades Joint Industrial Council (abbreviation)

**batten(s)** narrow lengths of timber, used in roofing

**benefit** advantage or profit; reward

**binder** a horizontal timber used as support for joists

**body language** the signals we give to other people by our facial expressions, gestures and posture

**bonus** extra money you may get (e.g. for working hard, doing a particularly good job or getting a job finished on time)

**bungalow** a house with only one storey

**burn off** to remove paint from wood using heat, e.g. with a hot-air gun

**capping strip** the strip of wood that goes along the top of a fence

**cash in hand** the practice of paying somebody with money in cash for doing a job, rather than giving them a wage slip; the person doing the job is responsible for paying tax and National Insurance Contributions but they are not insured if they have an accident

**casual** somebody employed as a 'casual' is employed on a temporary or irregular basis (e.g. for a day or a week or a month) – they don't have a contract

**ceiling joist(s)** beams that support a ceiling

**cement** a mix of lime and clay processed to a powder that sets hard when mixed with water

**cementitious** a word used to describe things made from cement

**centimetre** a metric unit for measuring distance, abbreviation 'cm'; (note that centimetres are not used in the construction industry)

**chock** a block or wedge used to keep something such as a wheel or round object in place

**Co.** company (abbreviation)

**commercial** construction work to do with buildings such as offices, shops and leisure facilities

**competence** proved ability to do something

**components** parts or materials that go together to form the elements of a building (e.g. bricks are components that go together to form a wall, which is an element)

**concrete** a mixture of sharp sand, aggregate, cement and water in certain proportions

**confirm** repeat information to check it

**confirmed** agreed, set or established

**conservation** maintaining the environment – buildings, trees, countryside, etc.

**contaminant** something that pollutes, e.g. dirt, dust, gas, liquid

**contract** written agreement between two people or companies (e.g. to do a particular task)

**contractor** any person who is carrying on a business and pays others to work for them

**corrosive** burns through things; acids are corrosive

**cross-bearer** a horizontal timber that crosses other timbers at right angles

- cross-section** a drawing that shows how a building would look if it was sliced through from roof to floor with an imaginary saw
- cubic metre** a metric unit for measuring volume; abbreviation 'm<sup>3</sup>'
- cubic unit** a unit with three dimensions, used for measuring volume
- cultural** national, of a particular country or origin
- data** information, facts and statistics
- decimal** a term commonly used to refer to decimal fractions where the number of tenths, hundredths, thousandths, etc. are represented by digits following the decimal point
- deductions** money taken away from your gross salary, to cover tax, pension contributions, National Insurance Contributions, etc.
- defects** faults or damage
- disposable** throw-away, not reusable
- dry bonded** stacked, but not fixed in position with cement, with the vertical joints overlapping in each course
- duration** the time that something (e.g. a job or journey) lasts or takes
- element** a part of a structure made from a number of components (e.g. a roof is an element made up of tiles, which are components)
- elevation** a drawing that shows a view of a building from the front, rear or side
- enquire** ask or find out about
- environment** place or surroundings
- EPS floor insulation** expanded polystyrene floor insulation – sheets of polystyrene used to insulate floors
- evaluate** weigh up or assess
- exemption** exception
- express** to state or put across
- extended** made longer or wider
- exterior walls** walls that form the outside of the building
- external door** a door situated on the outside of the building, through which you enter and exit the building
- facial expressions** the look on your face that shows a particular feeling or emotion, e.g. smiling to show happiness
- FIFO** first in first out (acronym) – system for the rotation of stock
- final set** concrete is hard approximately 10 hours after mixing – this is called the 'final set'
- floor plan** a diagram that shows the layout of the rooms on the floor of a building
- foot** an imperial unit for measuring distance; abbreviation 'ft'
- formal** official and proper
- function** use
- gaffer** boss (slang)
- gallon** an imperial unit for measuring volume or capacity; abbreviation 'gal' or 'g' (as in mpg – miles per gallon)
- galvanised** a term describing iron or steel that has been coated with zinc to protect it and prevent it from rusting
- gauge** an instrument that measures the amount, level or contents of something
- gauging water** the amount of water in a mix
- gestures** movements of the body (usually hands and arms) to show an idea or meaning, e.g. waving to attract attention or say goodbye
- gist** the general idea of what something is about
- gram** metric unit for measuring weight or mass; abbreviation 'g'
- gross wages/pay** your pay before any deductions are made
- hazard** a danger or risk
- hazardous** potentially dangerous or risky
- horizontal** straight across
- housekeeping** keeping an area tidy and well maintained
- hrs** abbreviation for 'hours'
- hundredweight** an imperial unit for measuring weight or mass; abbreviation 'cwt'
- identification** recognition or discovery
- identification mark** a mark that shows who an item belongs to (e.g. a name, a personal sign or initials)
- identify** pick out, recognise or work out
- impervious** not allowing fluid to pass through; waterproof
- implement** apply; put into practice
- improve** make better
- inch** imperial unit for measuring distance; abbreviation 'in' or "
- income tax** money taken from your wages by the Government to pay for education, defence, roads, etc.
- indentured** under contract
- induce** bring on, encourage
- industrial** construction work including buildings such as factories, warehouses and garages
- informal** relaxed and comfortable
- infrastructure** the basic transportation, communications, power and sewage systems that

are necessary for a country's economy to operate – water, drains, electricity, roads, railways, harbours, telephone lines, etc.

**ingested** swallowed

**initial set** concrete goes stiff approximately 30 minutes after mixing – this is called the 'initial set'

**insulation** a material designed to keep warmth in and cold out

**interior walls** walls that divide the inside of the building into different rooms

**interlocking** connected, linked

**issue** give out or hand out

**joist** a parallel beam that supports a floor or ceiling

**kilogram** metric unit for measuring weight or mass; abbreviation 'kg'; 1 kg = 1000 g

**kilometre** metric unit for measuring distance; abbreviation 'km'; 1 km = 1000 m

**litre** metric unit for measuring volume or capacity; abbreviation 'l' or 'L'; 1 l = 1000 ml

**logical** sensible, rational

**m<sup>2</sup>** standard abbreviation for 'square metre', a metric unit for measuring area

**m<sup>3</sup>** the standard abbreviation for 'cubic metre', a metric unit for measuring volume

**memory** storage or remembering information; function on a calculator used to store and retrieve numbers

**metre** metric unit for measuring distance; abbreviation 'm'

**mile** imperial unit for measuring distance; abbreviation 'm' (as in mph – miles per hour)

**millilitre** metric unit for measuring volume or capacity; standard abbreviation 'ml'; 1000 ml = 1 l

**millimetre** metric unit for measuring distances; abbreviation 'mm'; 1000 mm = 1 m

**minimise** to make as small as possible

**minimum wage** the lowest amount that an employer is allowed to pay an employee; the minimum wage is set by the Government Minimum Wage Helpline 0845 6000 678. From 1/10/04 the national minimum wage is: £4.85 an hour for workers aged 22 and over (workers aged 22 and over can be paid £4.10 an hour for the first 6 months in a new job with a new employer); £4.10 an hour for workers aged 18–21 years; £3.00 an hour for workers aged 16–17 (16- and 17-year-old apprentices are exempt from this rate)

**monitor** keep a regular check on something

**monthly** each month

**mortar** a mix of sand, cement and water in certain proportions

**National Insurance Contributions** money taken from your wages by the Government to pay for the National Health Service and old-age pensions

**net wages/pay** wages/pay after all deductions have been made; 'take home' pay

**newel (post)** a large vertical post at either end of a flight of stairs into which the string or stringer is jointed

**nosing** the overhanging edge of a stair tread

**opinions** views or beliefs

**ounce** imperial unit for measuring weight or mass; abbreviation 'oz'

**overtime** extra hours worked; also, the money you get paid for working those extra hours

**pa** 'per annum' (Latin), meaning 'each year' (abbreviation)

**pension** money taken from your pay to put into savings for your retirement

**per** for each

**permit** a licence to carry out a particular job

**pier** a masonry structure used to support or to strengthen

**pilot holes** small holes drilled in wood so that nails can be hammered in more easily

**pint** imperial unit for measuring volume or capacity; abbreviation 'pt'

**plc (or PLC)** public limited company (abbreviation), a large company or organisation

**polythene** a tough, light material used for damp-proof courses and membranes

**posture** the position of the body (e.g. upright or slumped over)

**premises** buildings used for business

**private (contract)** construction work paid for by money from individuals and groups that are not part of any government organisation

**procurement** the process by which a client gets a structure built; it involves contractors tendering for work

**productivity** efficiency, how much work is done in a certain time

**proportion** relative amounts or quantities

**prospects** future chances

**public** construction work paid for by central and local government

**qualifications** formally recognised skills

- raft foundation** a foundation in the form of a concrete slab that underpins the entire base of a building
- rails** the upright parts of a ladder that hold the rungs together; also called 'beams' or 'stiles'
- rate** the amount you earn per hour
- ratio** a way of comparing one amount to another; the relative amounts (see also proportion)
- recognition** awareness, appreciation of something
- reconstitute** return to its original state by adding water
- refurbishment** bringing an existing building up to date
- registration** officially joining something or signing on to become part of something
- relevant** appropriate
- render** to coat an outside wall with a cement-based product in order to improve its appearance and to protect it from the weather
- resistant** not affected by
- respond** to react or reply
- restrictions** limits
- reverse** go backwards
- riser** the vertical part of a step
- rotation** in stock rotation, items should be used in date order – the one with the nearest date should be used first
- salary** wages or earnings per year
- sand** to make a surface such as wood smooth by rubbing it with glass paper or sand paper (verb); also, a building material (noun)
- score** cut a groove into (verb); a deep scratch mark (noun)
- screed** a cement-and-sand mortar laid over concrete floors to make a smooth and level finish
- sector** segment, part, division
- secure** safe, likely to stay in place
- secured** safe or tied down firmly
- select** choose
- self-employed** working for oneself rather than an employer
- sick pay** pay you get if you are off work for a length of time because of illness or injury
- skill** ability, something a person can do well
- SMP** Statutory Maternity Pay – money that a woman receives while she is off work, just before and after having a baby (abbreviation)
- spandrel** the triangular area under a flight of stairs
- specification** written instructions that tell you exactly what material to use for the construction work
- square metre** metric unit for measuring area; abbreviation is 'm<sup>2</sup>'
- square unit** a unit for measuring area
- standard pay** the pay you get for a standard week's work, with no extras
- step** a combination of tread and riser
- storey** a floor or level of a building
- strap** a metal plate used for holding components together
- string** the inclined board of a stair into which the treads and risers are cut or housed; depending on their position they might be called the 'wall string' or 'outer string'
- structure** the load-bearing elements of a building
- subcontractor** an individual or company hired to perform a specific task as part of the overall project
- substructure** all the structure below ground level
- superstructure** all the structure above the substructure
- symbol** a sign with a particular meaning (e.g. 'x' means multiply)
- tax** money paid to the Government
- tender** put in a bid for work
- ton** imperial metric unit for measuring weight or mass; abbreviation 't'; 1 t = 2240 lb
- tonne** metric unit for measuring weight or mass; not usually abbreviated; 1000 kg = 1 tonne
- tread** the horizontal part of a step
- truss** a structural frame that acts as a beam
- unauthorised** without permission
- update** bring up to date
- vacate** leave
- variation** difference
- ventilate** allow air in
- vertical** straight up, from the ground upwards
- visor** an eyeshade or small screen often attached to a safety helmet to help protect the eyes
- vital** extremely important
- volume** the amount of three-dimensional space that a substance occupies; volume is calculated by multiplying the length, width and height together and the answer is expressed in cubic units (e.g. cubic metres – m<sup>3</sup>)
- vomiting** sickness
- wastage** the amount of material that is thrown away
- wedge** a triangular-shaped object designed to keep something in place
- weekly** each week
- yard** imperial unit for measuring distance; abbreviation 'yd'

