

Brickwork

Level – L1/2

Type of Pack: Taster/Introduction



Name:

INTRODUCTION

Hello...

We hope you find this **Taster/Introduction Pack to Brickwork** easy to follow and interesting whilst in Lockdown.

Within this pack there is variety of activities that you may see when starting on the course and health and safety questions and answers (health and safety is a unit that is completed in all construction courses).

You may not be able to complete all of the questions, but do not worry, this is just a sample of the type of work that you will learn to complete whilst on the course.

CONTENTS

- Different equipment used in bricklaying
- Test your knowledge questions
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Tools and equipment

There are many tools and different types of equipment used by a bricklayer. If a bricklayer is working on a new housing site, he will use fewer tools than a bricklayer who carries out extensions and alteration work. Most bricklayers carry a wide selection of tools so as not to be caught out if there are changes to the type of work to be undertaken or if extra work is required. Most bricklayers collect their tools over a long period of time, usually adding tools as they require them, normally to carry out a specific job at that time or sometimes to replace them. Normally they are bought or hired, depending on how often the tools get worn out.

Health and safety

All tools are potentially dangerous and you, as an operator of tools, must make sure that all health and safety requirements relating to the tools are always carried out. This will help ensure that you do not cause injury to yourself and, equally important, to others who may be working around you and also the general public. Make sure you follow any instructions and demonstration you are given on the use of tools, as well as manufacturers' instructions provided on purchase of the tool.

Basic health and safety rules

1. Always make sure you use the correct personal protective equipment (PPE) required to use the tool and do the job you are carrying out.
2. Never 'make do' with tools. Using the wrong tool for the job usually breaks health and safety laws.
3. Never play or mess around with a tool regardless of the type, whether it is a hand tool or power tool.
4. Never use a tool you have not been trained to use, especially a power tool.

Bricklayer's tools are their living, therefore great care should be taken when purchasing them, make sure they are of good quality, durable and the right tool for the job.

Brick trowel-Bricklaying Trowel

The brick trowel is used by the bricklayer to take the mortar off the mortar board, lay it on to the wall, spread it to form a uniform bed ready for the bricks to be laid upon. Brick trowels can be purchased in different sizes and for left- or right-handed people. They are made from solid rolled forged carbon steel, with a hickory handle. Always clean your trowel with water after use, dry it thoroughly and lightly oil to prevent rust from forming.



Pointing trowel

Pointing trowels can be purchased in different sizes depending on requirement and preference. They are used for filling in joints and pointing certain types of joint finishes. They are made from solid rolled forged carbon steel, with a hickory handle. Clean as you would a brick trowel.



Joint raker (Chariot)

The joint raker often goes under the name 'chariot'. This tool is used for raking out soft mortar joints, whether to give a joint a finish on new work or to take out old mortar ready for repointing. Made of steel, it has an adjustable raking pin to change the depth the joint is recessed.



Jointer

Usually made from steel, this tool is used to form the joint finish after building a wall.

This serves two purposes:

1. It helps to make the joint more waterproof.
2. The appearance of the wall looks more pleasing.



Tape measure

Tape measures come in many sizes, from 3 m up to 10 m for the pocket type, and from 10 m up to 30 m for larger projects (some can go up to 100 m.) Used for measuring or checking sizes, they are usually made with plastic, fibreglass or steel cases, with a steel measure. Some come with both metric (centimetres and metres) and imperial (inches and feet) measurements, although most only have metric measures.



Brick hammer

Brick hammers are used for cutting and shaping bricks and are made from forged steel with a hickory handle. The brick should be held stable, with the hammer held in the appropriate hand. With the square edge of the hammer tap the brick at the position you require the cut.



Club or lump hammer

This is a heavy hammer used together with a bolster chisel for cutting bricks/blocks by hand. It is also used with other chisels for cutting out bricks, knocking holes through walls and removing joints using a plugging chisel. It is made from forged steel, with a hickory handle, and different weights



Scutch or comb hammer

This is used to trim bricks or blocks to the correct size or shape. It is made from forged tempered steel, with a hickory handle. Small combs are inserted into the head to give the trimming blade and can come with a single or double scutch head. Great care must be taken when using this hammer as particles of the materials being trimmed fly off. Also, care must be taken not to hit your hands.



Chisels

There are many different types of chisel used by a bricklayer. Some of the most frequently used are described below.

Bolster chisel

This is used mainly for cutting bricks or blocks to the required size and angled shape. It is made from hardened tempered steel, usually in cutting blade sizes from 64 mm to 100 mm. Some come with safety handle grips.



Plugging chisel

This type of chisel is used for taking out existing mortar joints for repairs and cutting out existing joints for lead work. It is made from fluted cast steel and is normally available in just one size.



Maintenance

Care must be taken when using chisels to make sure the blades are always sharp. Make sure that the striking end does not form a 'mushroom' through repeatedly hitting, as parts of this are likely to break off resulting in injury to the user. If 'mushrooming' does occur the end must be ground smooth before further use.

Spirit levels

Made from aluminium, spirit levels come in various sizes from 225 mm to 1200 mm, with 1200 mm being the main size that a bricklayer uses. They are used for levelling things horizontally and for plumbing vertically, having bubbles that give a reading between set lines to determine accuracy of the work. Some levels have an adjustable bubble at the bottom for levelling angled work.



Great care must be taken when using levels as they can easily go out of “true”, which can result in work seeming to be level or plumb by the reading but actually being wrong. This could result in work having to be taken down and redone. The main cause of a spirit level going out of true is normally that the level has been hit with a trowel or hammer, dropped or in other ways misused. Always wash the spirit level off with water after use to keep it clean.

Boat levels

These are useful for levelling and plumbing small work and are always handy to have in your toolkit. They work on the same principle as the larger levels.



Checking a level for accuracy (true)

Before you use a level, it is best to check it for accuracy (true) first. You can do this by simply placing the level on a flat surface or on previously levelled screws, making a mark at both ends and reading the bubble position. You should then turn the level around, reversing the positions of the ends and make sure they touch your marks. If the bubble is in the same position both times you read it, the level is accurate.

If the bubbles give different readings, the level is out of true and the bubble will need adjusting to make the level accurate.

Lines and pins

Lines and pins are used for laying bricks and blocks. Once the corners have been erected to ensure work is in a straight line the pins are placed into the perp joints at each end of the run so that the line runs from the top of the laid brick at each end. This ensures that the bricks that are to be laid run in a straight line and, by putting the top of the brick to the line keeps the bricks level between the two points, if the corners are correct.



The pins are normally made from forged steel for light duty work. Some are made from thicker steel for heavier duty work. The line can be made of nylon or cotton. Nylon is more durable but less flexible, whereas cotton is the opposite. While using either, care should be taken when laying the bricks as the line will cut very easily.

Corner blocks

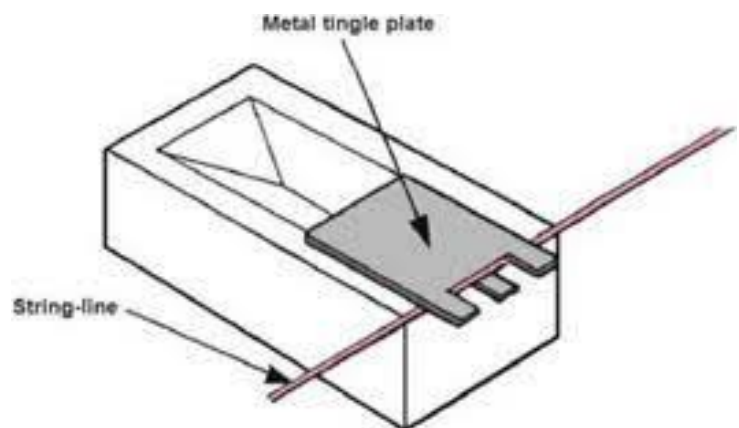
Corner blocks are used to attach the line to keep the brickwork straight. They are made from wood, plastic or steel and fit on to the corners of the brickwork with the lines pulled tight to hold them in place. They are then raised to complete each course as it progresses



Tingle plate

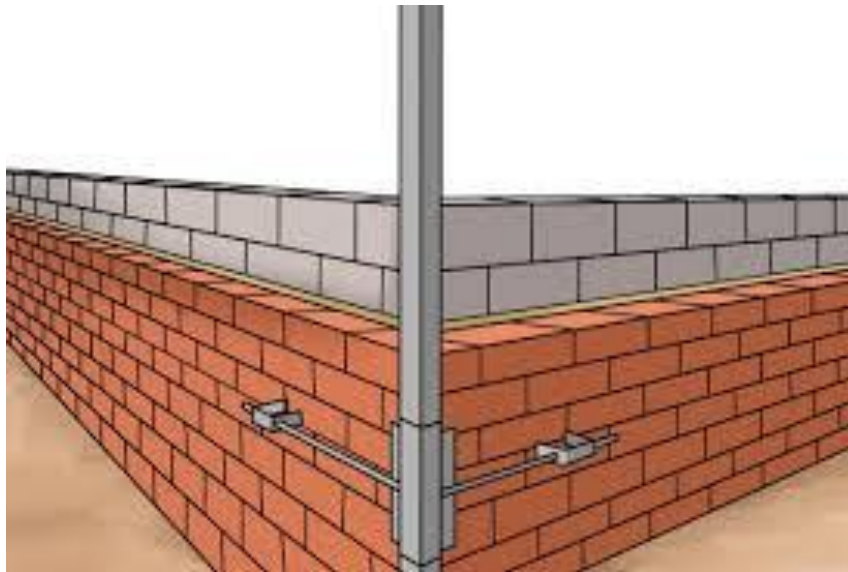
This is used to stop the line from sagging in the middle on longer runs of brickwork. The central brick of the wall should be set to the correct gauge and the tingle plate set on top with the line passing through to stop sagging.

A tingle plate is made of steel sheet and is worth having in your kit. It could stop work from having to be rebuilt due to the wall sagging in the middle.



Corner profiles

Corner profiles are used to save time, as there is no need to build corners. They are secured to existing brickwork at the bottom and are adjustable to allow for making plumb. They are made of right-angled steel and the bricks sit hard against the internal corner of the profile when building. If set up correctly, once removed after completion of the brickwork, the corner should be plumb on both edges, which should be more accurate than hand-built corners using the conventional method. Profiles can be set on each corner. They can then be marked for correct gauge and lines pulled from corner to corner speeding up the process.



Part 1 - Test your knowledge

1. What is a scutch hammer used for?

2. What does PPE stand for?

3. What is a tingle plate used for?

4. To use any power tool what must you have had?

5. What is a bolster used for?

6. How do you check a level for accuracy?

7. What is another name for a joint raker?

On many courses you will be required to complete a unit on Health and Safety which will have a multiple-choice assessment. Example below.

Health and Safety

The Health and Safety unit has some pre-notes with questions that will need to be read before the actual test. This is especially important if you do not have, or have not studied health and safety in construction, for a while.

The main subject areas are **Hazards and Risks**, **Safety Signs**, and **HSE**.

Hazards and Risks

A hazard is something that can cause harm or damage, for example noise, the working area, equipment, tools, and materials.

A risk is the likelihood that a hazard will cause harm or damage and is assessed from low to high.

Safety Signs

In construction there are 5 categories of safety signs **Mandatory**, **Prohibitive**, **Safe Condition**, **Warning**, and **COSHH**.

Mandatory (you must do) safety signs are a blue circle with an image in white in the centre. They are used to give instructions and actions that must be done, such as specific PPE that must be worn.

Prohibitive (you must not do) safety signs are a red circle with a diagonal line through it and a black image on a white background in the centre. They are used to stop certain behaviour, such as no smoking.

Safe Condition signs are green with an image in white in the centre. They are used to show escape routes, assembly points, and where specific safety equipment is sited.

Warning safety signs are a yellow triangle with black boarder and a black image in the centre. They are used to warn of hazards or hazardous material, such as flammable.

COSHH (Control of Substances Hazardous to Health) safety signs are a white diamond with a red boarder and a black image in the centre. They are used on containers of chemicals (hazardous substances) such as Explosives. These signs have replaced the old European signs which were an orange square with a black boarder and a black image in the centre.

HSE (Health and Safety Executive)

The HSE is a government agency that is responsible for regulation and enforcement of workplace health, safety and welfare, they research and monitor occupational risks. They must be notified of larger scale construction projects under CDM (Construction Design Management) regulations and have to be notified if serious accidents and breaches of health and safety law occur. The HSE issue improvement and prohibition notices, publicise health and safety workplace regulations, and instigates prosecution which can lead to fines and or imprisonment.

Part 2 - Test your knowledge

Here are some multi choice questions that have only one correct answer. See how many you can get right.

1. What is a hazard? Choose the most accurate answer.

- A. A hazard is the likelihood that a hazard will cause harm or damage.
- B. A hazard stops accidents from happening.
- C. Hazards rarely exist and can cause harm.
- D. A hazard is something that can cause harm or damage.

2. What is a green safety sign with a white image in the centre?

- A. A safe condition sign.
- B. This type of sign no longer is being produced.
- C. A warning sign.
- D. A mandatory sign.

3. COSHH safety signs are found where? Choose the best answer.

- A. On walls of buildings.
- B. On specialist clothing of construction workers.
- C. Food labelling.
- D. Product containers containing chemicals.

4. Do larger scale construction projects have to be notified to the HSE.

- A. True.
- B. False.

Answers – Part 1 Test your knowledge

1. What is a scutch hammer used for?

This is used to trim bricks or blocks to the correct size or shape

2. What does PPE stand for?

Personal Protective Equipment

3. What is a tingle plate used for?

This is used to stop the line from sagging in the middle on longer runs of brickwork

4. To use any power tool what must you have had?

Never use a tool you have not been trained to use, especially a power tool

5. What is a bolster used for?

This is used mainly for cutting bricks or blocks to the required size and angled shape

6. How do you check a level for accuracy?

You can do this by simply placing the level on a flat surface or on previously levelled screws, making a mark at both ends and reading the bubble position.

7. What is another name for a joint raker?

Chariot'

Answers – Part 2 Test your knowledge

1. What is a hazard? Choose the most accurate answer.

- A. **A hazard is the likelihood that a hazard will cause harm or damage.**
- B. A hazard stops accidents from happening.
- C. Hazards rarely exist and can cause harm.
- D. A hazard is something that can cause harm or damage.

2. What is a green safety sign with a white image in the centre?

- A. **A safe condition sign.**
- B. This type of sign no longer is being produced.
- C. A warning sign.
- D. A mandatory sign.

3. COSHH safety signs are found where? Choose the best answer.

- A. On walls of buildings.
- B. On specialist clothing of construction workers.
- C. Food labelling.
- D. **Product containers containing chemicals.**

4. Do larger scale construction projects have to be notified to the HSE.

- A. **True.**
- B. False.

