



# Basic building construction

## Works

## Level I

# Learning Guide-60

**Unit of Competence: Erect and Dismantle**

**Scaffolding and **formwork****

**Module Title: Erecting and Dismantling**

**Scaffolding and Formwork**

**LG Code: EIS BBCW1 M15 LO1-LG-60**

**TTLM Code: EIS BBCW1 M15 TTLM 0919 v1**

**LO 4: Inspect, repair and alter  
erected scaffolding**



<b>Instruction Sheet</b>	<b>Learning Guide # 4</b>
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Erected modular scaffolding is inspected for damage, corrosion, wear and compatibility.
- Current use of scaffolding is checked against original design and is in accordance with regulations and specifications.
- Scaffolding stability is inspected and confirmed.
- Alteration or repair carried out where specified.
- Inspection log and handover is completed and dated, ready for signing by a certificated scaffold.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:-

- Erected modular scaffolding is inspected for damage, corrosion, wear and compatibility.
- Current use of scaffolding is checked against original design and is in accordance with regulations and specifications.
- Scaffolding stability is inspected and confirmed.
- Alteration or repair carried out where specified.
- Inspection log and handover is completed and dated, ready for signing by a certificated scaffold.

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4, in page ---, ---, --- and --- respectively.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” ,---” in page ---, ---, --- and --- respectively

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<b>Information Sheet-1</b>	<b>Inspection damage, corrosion, wear and compatibility for erect scaffolding</b>
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### Inspecting components

Scaffolding components and tools need to be in good working order or they won't operate the way they should and could be dangerous, so you need to inspect each component carefully before you use it. If anything appears to be in poor condition, stop using it immediately. Defects or damage to look for include:

- Rust or cracking around weld areas of frames
- Dented tubes • bent standards or frames
- Bent or twisted ladders
- Split or warped planks or sole boards
- Seized couplers
- Broken toggles
- Loose parts, eg heads of hammers



### Out- of- service tags

You need to tag then report tools or components that are damaged or in any way not fit or safe for use, so that other workers know not to use them. This is often called 'tagging out'.

This process involves the following steps:

1. Identifying items that have faults or are damaged
2. Completing an out- of- service tag, including a description of what's wrong with the item, the date and a signature
3. Removing the item from service
4. Reporting the item to your supervisor or the person in charge of maintenance.



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<b>Self-Check - 1</b>	<b>Written Test</b>
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Directions: Answer all the questions listed below.

1. The lowest section of a scaffolding structure, i.e. the part in contact with the ground, is called the\_\_\_\_\_?

- A) Footing            B) Toe boards  
C) Protect primary support            D) None

2. \_\_\_\_\_are attached to the standards timber

- A) kick boards    B) Toe boards  
B) A and B            D) None

3. \_\_\_\_\_are a prefabricated component, most often an aluminum board with a non-slip covers

- A) Platforms            B) kick boards  
B) Footing            D) None

**Note: Satisfactory rating – 3 points**

**Unsatisfactory - below 3 and 4 points**

You can ask you teacher for the copy of the correct answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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<b>Information Sheet-2</b>	<b>Checking the original design with regulations and specifications.</b>
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### Introduction

Once scaffolding has been erected and is in use, there are still important procedures to follow to ensure it remains in a safe condition and is used correctly. The inspection of scaffolding on site is particularly important when the scaffold is in place for a prolonged period of time. Erected scaffolding must:

- be checked for compliant use
- be inspected regularly (at least every 30 days)
- have any scheduled changes made according to the scaffolding plan
- have all repairs carried out safely.

There will also be repairs and alterations required during the life of the scaffold on the worksite.



### Manufacturers' instructions



There's a huge variety of scaffolding equipment available from a range of manufacturers. This can result in differences in areas such as how the scaffolding is put together or the load that it can support, so it's important that you're familiar with the manufacturer's instructions for the particular scaffolding you're erecting, especially if you've not used it before. Manufacturers' instructions can be found on the company's website or may be delivered to site with the

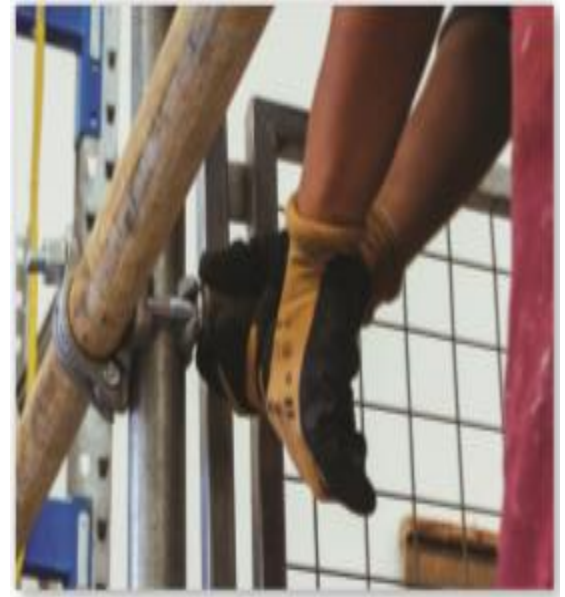
scaffold. These instructions will cover aspects such as identifying the parts, planning and preparation, and the scaffold construction sequence. They also cover the safe use of the scaffold. All manufacturers' instructions are based on ETHIOPIAN Standards®.

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### **Compliant use of scaffold**

When the scaffolding was originally designed, it was to suit particular purposes or work tasks. It's important to check that this is still how the scaffold is being used, as non-compliant use could prove dangerous. If the use has changed, it's up to the person responsible for the scaffold (this will usually be the job or site supervisor) to check that it's suitable for the new use. Reasons for changes of use could be that additional work has to be carried out or different materials or additional workers are needed to complete the scheduled task. If the scaffold is no longer suitable for the new use, a plan needs to be drawn up detailing the alterations required to suit the new use.



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<b>Self-Check - 2</b>	<b>Written Test</b>
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Directions: Answer all the questions listed below.

1. The lowest section of a scaffolding structure, i.e. the part in contact with the ground, is called the\_\_\_\_\_?

- A) Footing            B) Toe boards  
C) Protect primary support            D) None

2. \_\_\_\_\_are attached to the standards timber

- A) kick boards    B) Toe boards  
B) A and B            D) None

3. \_\_\_\_\_are a prefabricated component, most often an aluminum board with a non-slip covers

- A) Platforms            B) kick boards  
B) Footing            D) None

**Note: Satisfactory rating – 3 points**

**Unsatisfactory - below 3 and 4 points**

You can ask you teacher for the copy of the correct answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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<b>Information Sheet-3</b>	<b>Inspecting and confirm scaffolding stability</b>
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**Inspecting scaffold**

When scaffolding is in use, it's essential to inspect it regularly to make sure that nothing has changed since it was erected that could make it unsafe.

The frequency of inspections may vary depending on:

- Weather and site conditions
- The type and size of the scaffold
- The risks associated with scaffold collapse.

The person inspecting the scaffold must be capable of determining areas that have been incorrectly altered and identifying faults in the scaffolding.



There are many issues or events that can affect the integrity and safety of scaffolding. The main ones are listed here.

- **Knocked** – Although the scaffold should have been designed and erected in such a way that the day- to- day knocks it will receive on a construction site won't affect it, damage can still occur. Knocks are a particular issue if the scaffold's located close to vehicle access points or loading bays where it gets knocked and bumped regularly. To avoid knocks, try to erect the scaffold in areas where this can't happen, or manage the risk by using barricades and signs to restrict traffic.

- **Damaged** – Although scaffolding is pretty tough, heavy equipment, materials and vehicles on construction sites can damage it.

- **Wear** – Scaffold components can corrode over time and some parts wear away faster than others. Particular areas to examine for corrosion and wear include all connections and areas where water or debris collects. This is even more important for scaffold that has been in place for long periods.

- **Worked loose** – Over time and use, connections can work loose and the scaffold will become unstable. It's important to check all connections regularly.

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- Out of level – If the ground conditions have changed, eg there's been heavy rain and the ground's turned to mud, the scaffold may become out of level and therefore unsafe. It's important to check regularly for level, and adjust the footings if required.

- Removed/changed by users – Sometimes a tradesperson might decide to remove part of the scaffold to make their task easier, eg to remove a frame so that a large item can get through.

While it might seem to make sense at the time, the scaffold is designed and constructed with safety in mind first and foremost, and each component works with the others to keep the structure of the scaffold safe, so it's important that it remains complete and intact.

If the inspection reveals any safety issues with the scaffolding, these should be rectified before the scaffolding is used. If the issues can't be rectified, an 'out-of-service' tag should be attached, so that other workers know not to use it. You would then report the scaffolding to your supervisor.



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<b>Self-Check - 3</b>	<b>Written Test</b>
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Directions: Answer all the questions listed below.

1. The lowest section of a scaffolding structure, i.e. the part in contact with the ground, is called the\_\_\_\_\_?

- A) Footing            B) Toe boards  
C) Protect primary support            D) None

2. \_\_\_\_\_are attached to the standards timber

- A) kick boards    B) Toe boards  
B) A and B            D) None

3. \_\_\_\_\_are a prefabricated component, most often an aluminum board with a non-slip covers

- A) Platforms            B) kick boards  
B) Footing            D) None

**Note: Satisfactory rating – 3 points**

**Unsatisfactory - below 3 and 4 points**

You can ask you teacher for the copy of the correct answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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<b>Information Sheet-4</b>	<b>Repairing carried out where specify.</b>
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### Repairing scaffolding

Sometimes the scaffold will need to be repaired. In most cases, you'll need to safely remove the damaged part and either fix or replace it. If this requires the scaffold to be partially dismantled, follow safe dismantling procedures which are covered in the next section of this guide. If you have to leave the scaffold area to repair a component or find a replacement, hang an 'out-of-service' or 'scaffolding incomplete' tag so that no-one uses the scaffold until it's been repaired.



**Figure4.1 Repairing**



<b>Self-Check - 4</b>	<b>Written Test</b>
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Directions: Answer all the questions listed below.

1. The lowest section of a scaffolding structure, i.e. the part in contact with the ground, is called the\_\_\_\_\_?

- A) Footing            B) Toe boards  
C) Protect primary support            D) None

2. \_\_\_\_\_are attached to the standards timber

- A) kick boards    B) Toe boards  
B) A and B            D) None

3. \_\_\_\_\_are a prefabricated component, most often an aluminum board with a non-slip covers

- A) Platforms            B) kick boards  
B) Footing            D) None

**Note: Satisfactory rating – 3 points**

**Unsatisfactory - below 3 and 4 points**

You can ask you teacher for the copy of the correct answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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<b>Information Sheet-5</b>	<b>Inspecting log, handover and date, ready by a certificate scaffold</b>
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### Inspection log and handover

The worker who builds the scaffold will do what's called a 'handover' to the work or site supervisor once it's complete. In simple terms, this means advising the supervisor that the scaffold's ready for use. Sometimes a scaffolding inspection log needs to be completed as part of the handover. This log is a record showing:

- Who built the scaffold?
- Any changes made to the scaffold
- When the scaffold was last inspected
- Who carried out the inspection(s).

The log is usually filled in and signed by the person who builds the scaffold; it's sometimes also signed by a second worker, such as a supervisor.

A scaffolding log is more likely to be found on larger, commercial sites than small residential projects. A log is a requirement for scaffolding above four meters high. This is not covered by this unit. There isn't a standard document used for an inspection log; your supervisor will provide you with one if you're required to complete one.



Figure 5.1 Inspection



<b>Self-Check - 5</b>	<b>Written Test</b>
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Directions: Answer all the questions listed below.

1. The lowest section of a scaffolding structure, i.e. the part in contact with the ground, is called the\_\_\_\_\_?

- A) Footing            B) Toe boards  
C) Protect primary support            D) None

2. \_\_\_\_\_are attached to the standards timber

- A) kick boards    B) Toe boards  
B) A and B            D) None

3. \_\_\_\_\_are a prefabricated component, most often an aluminum board with a non-slip covers

- A) Platforms            B) kick boards  
B) Footing            D) None

**Note: Satisfactory rating – 3 points**

**Unsatisfactory - below 3 and 4 points**

You can ask you teacher for the copy of the correct answers.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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