

# **Unit 201: Health and safety in building services engineering**

## **Outcome 5**

# **Safety requirements for using access equipment**

# Working and heights



- Step ladders
- Ladders
- Roof ladders
- Trestle scaffold
- Tower scaffold (mobile)
- Scaffold (fixed)
- Elevated platforms



# Working and heights

The Working at Height Regulations requires that before work starts:

Employers **consider all options that are available, including options other than working at heights;** removing components and working at ground level; using specialist companies.



# Ladders

Class 1 – Industrial – up to 175kg

Class 2 – Commercial – up to 150kg

Class 3 – Domestic – up to 125kg

Manufactured from wood, aluminium, fibreglass (electricians colour-coded yellow).

Ladders are for short duration work only – 30 mins max.

# Ladders



## **Video link:**

<http://www.youtube.com/watch?v=bRV4d9LCawU>

# Ladders

- Types
- Raising and lowering
- Securing
- Lifting and carrying
- Storing
- Inspecting
- Safe working.

# Ladders

- Stand on a **firm** and **even** base
- Set at the correct **angle**, 75° or 4 up: 1 out
- Watch out for overhead cables
- Beware of wet, icy or greasy rungs
- **Do not** use damaged ladders
- **Lash** the top of the ladder
- **Anchor** the base of the ladder
- The top of the ladder should extend 1.07m past the top of the working platform (4-5 rungs clear)
- Never overload a ladder.

# Scaffolds

## Scaffold towers

### Static:

- Small section of tubular scaffold in fixed position.

### Mobile:

- Light work for short durations
- Lockable wheel
- Do not move with equipment or people still on platform
- Maximum height is three times the outrigger
- Always read the manufacturer's instructions (MIs).



# Scaffolds



# Scaffolds

## Fixed scaffold (tubular)

Independent:

- It is independent to the building with two **standards**.

Putlog:

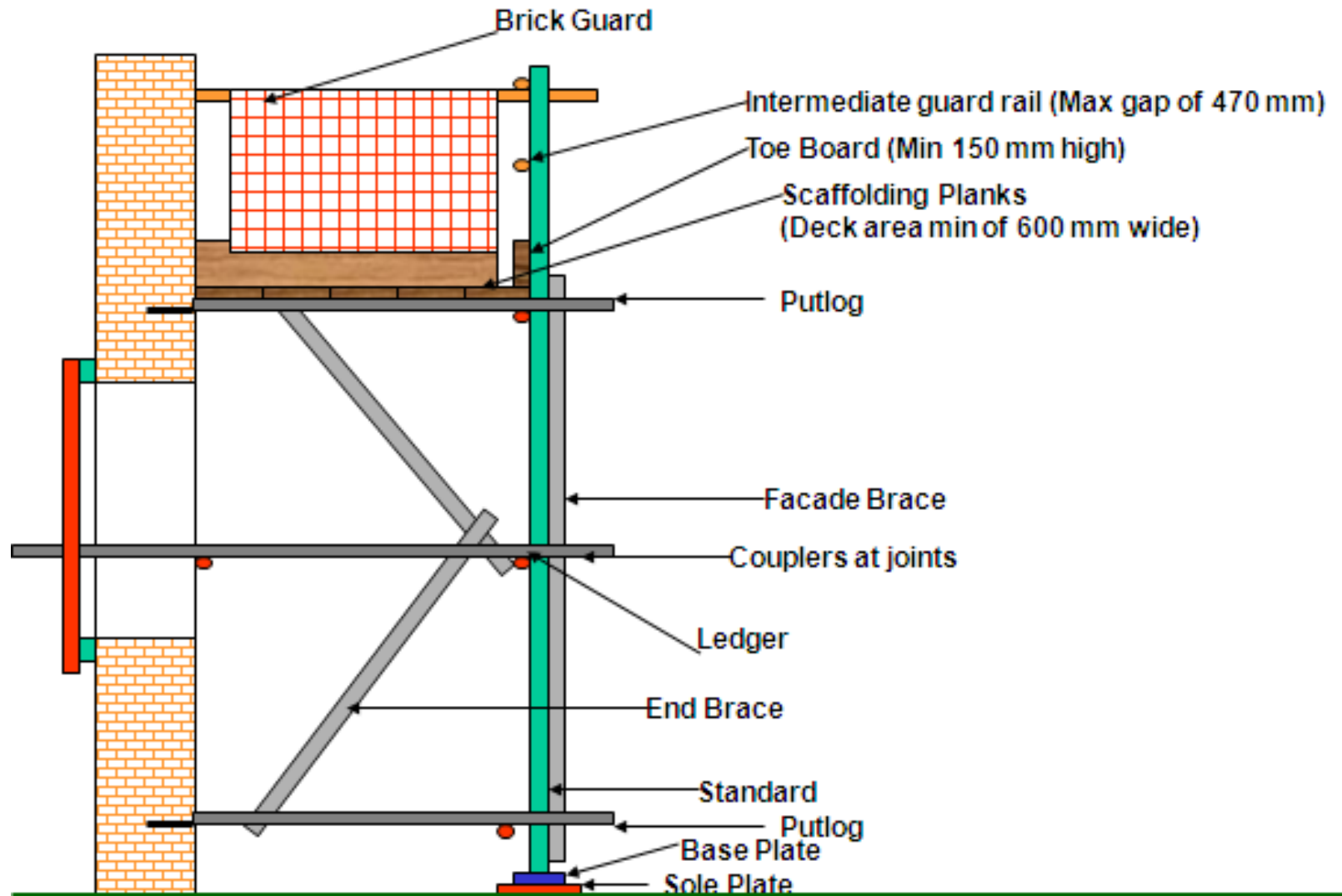
- Gains support from building and is used on new builds
- The spade of the **putlog** rests in the brickwork.

# Scaffolds

Scaffolds from  
Singapore and India



# Scaffolds



# Scaffolds

- Working platform
- Toe board – 150mm
- Interim guard – 470mm
- Hand rail – 910mm
- Brick guards
- Close board decking
- Soleplate to spread force
- Inspect before use each time; fully inspected every seven days; installed by trained operatives.

# Mobile platforms

## **Mobile Elevating Work Platforms**

These provide convenient access without scaffolding.

- Training is essential
- Gate closed
- Operating weights
- Weather
- Stability
- Signs.