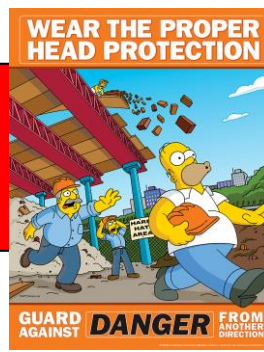


TOOLBOX TALK
NO.40
Scaffold



Scaffolds must only be erected, altered or dismantled by operatives who have been trained to do so and are competent, or under the direct supervision of someone who is. The main legislation that applies to scaffolding is the Work at Height Regulations. Scaffolds are subject to statutory inspections with reports of inspections raised where appropriate. All scaffolds must be properly erected, stable, tied to the structure as appropriate, suitable for their purpose and equipped with toe boards and guard rails on all working platforms.

While a scaffold structure is actually being built, the operative does not always have the protection afforded by guard rails and toe boards until they have installed the. They rely upon the use of personal fall protection equipment (harnesses) to arrest a fall during this time. Personal fall protection equipment used for scaffolding should be inspected by the user before use, every three months by a competent person and recorded and at other intervals if the need is identified via a risk assessment.

Scaffold foundations

The foundations for all scaffolds must be adequate strength to support and disperse the load. On hard surfaces, such as steel and concrete, standards may be placed directly on the surface, although it is generally preferable to use a base plate that is 150mm x 150mm in size. Sheet piling or plastic treads can also be used to protect sensitive floors from damage or marking.

On other surfaces, the load should be spread by using base plates and sole boards. The soil or ground beneath the sole board should be level and properly compacted.

Sole board minimum dimensions should be:

- On hard ground – 450mm x 225mm x 35mm
- On soft ground – 760mm x 225mm x 35mm

Bricks, blocks and scraps of odd timber **MUST NOT** be used as sole boards.

On sloping ground, steps should be cut into the ground to accept base plates or sole boards. If the slope exceeds 1:10, an engineer should check that the ground has sufficient stability.

Scaffold tubes and fittings must comply with BS EN 39:2001. Ends should be cut square and clean, free from any bends or distortion, corrosion, lamination splits or surface flaws. Fittings must comply with BS EN 74:2005. Scaffold boards should comply with BS 2482: 2009 and should not be warped, twisted, split or badly worn, painted or otherwise treated so as to conceal any defects.

The minimum amount by which any scaffold board should overhang any putlog or transom must be NO LESS than 50mm.

The maximum overhang varies with the thickness of the scaffold board used.

All scaffold boards that comply with BS 2482:2009 should:

1. Be free from splits, shakes, excessive knots, paint, oil or concrete
2. Be usually 225mm wide but not less than 220mm
3. Not be painted or otherwise treated to conceal defects
4. Be banded or nail plated at ends
5. Be supported by putlogs or transoms at the appropriate spacing's
6. Overhang at least 50mm but not more than four times the thickness of the board, unless secured from tipping
7. Be guarded against the wind causing the boards to lift
8. Be secured to prevent movement if short boards less than 2.13m are used.

Scaffold ties

A tie secures the scaffold to the supporting structure and is provided to resist the inward and outward movement of the scaffold and also to give some additional longitudinal stability. Ties are generally designated as moveable or non-moveable. Where possible, ties should be left undisturbed until the scaffold is dismantled. Generally ties should have a minimum tensile or compressive capacity of 6.1kn.

Types of ties are: through tie, reveal tie, box tie and lip ties.

Rakers

For lower level and domestic scaffolds, where it is not possible to install normal ties, the stability of a scaffold can be achieved by the use of rakers. A single, unjointed raking tube, not more than 6.4m in length, may be coupled at the top to the ledger at the second lift, extending at an angle not greater than 75 degrees to the horizontal. The foot of the raking tube must be well rounded and must always be tied back to the main scaffold.

Gangways and Runs

All gangways and runs should be:

600mm wide (three boards) if used for barrowing and the passage of materials

Preferably horizontal, but where this is not possible they may slope up to a maximum gradient of 20%.

Guard-rails

Guard-rails are just one of the options to consider as a suitable and sufficient measure or means of protection when a person could fall any distance liable to cause them personal injury.

The main or top guard-rail must be 950mm above the edge, or above a working platform, from which any person is liable to fall.

A second guard-rail or mid guard rail may be place approximately halfway between the top edge of the toe board and the top guard-rail, so that there is no gap larger than 470mm between the guard-rails or between the mid guard-rail and the toe-board.

Toe-boards

Toe-boards must be:

- ✓ Fitted in conjunction with all guard-rails
- ✓ A minimum height of 150mm
- ✓ Fixed inside the standard, at a minimum of two positions.

Access to scaffolds: The work at height regulations require employers to specify the use of existing structures as a means of access to height in preference to temporary measures such as ladders. Whilst ladders have been the commonly used means of access to scaffolds, the use of other, safer means of access, such as stair towers should now be considered in preference.

Ladders should not be defective in anyway, not be painted or treated in any way that might hide defects. They should be placed on a firm footing, with each stile equally supported and positioned approximately at an angle of 75 degrees that is one measure horizontal to four measures vertical

Protection of the public and other persons against falling materials should be provided by the use of nets, brick guards, toe-boards, protective fans and so on.

Loading of scaffolds – any scaffold should not be loaded so that it gives rise to a danger of collapse or to any deformation that could affect is safe use. The scaffold should be checked periodically to ensure that the loads are within the permissible limits.