

Using mast climbers

Construction Occupational Health case study COH02

The problem

Progressing external brickwork traditionally requires the use of a scaffold. Laying bricks from a scaffold still means that workers bend and stretch to do the work, which is also inefficient.

The risks

Bending and stretching actions, repeated throughout the day, can lead to discomfort. Laying bricks from scaffolding is restrictive and can result in awkward postures, discomfort and injury.

The solution

Mast climbers were used to provide bricklayers with access and working platform. This allowed the platform height to be precisely controlled so that the workers could lay bricks at the most comfortable and productive height. The amount of time spent bending and stretching to position bricks was greatly reduced.



Figure 1 Mast climber being used for brickwork



Figure 2 A series of mast climbers being used for brickwork



Figure 3 The working platform can be set so that the tradesmen can work at a comfortable height without excessive bending and stretching.

The benefits

- The mast climber enables bricklayers to work at the most suitable height.
- The manufacturer reported a big increase in the rate of production, though this might be tempered by the mortar setting times.
- Power sockets, lighting and canopies can be provided on the mast climber. Progress is less likely to be affected by wet weather.
- A better quality of brickwork is possible with mast climbers – less damage is done to freshly laid courses than when using scaffolding.
- Not having to stop and start work when an area of scaffold is left free by other trades.
- Eliminates interference with scaffold.



Figure 4 Bricklayers working from a mast climber. It allows them to work at about waist height and adopt a good posture

Notes

- A mast climber can be expensive to use, and workers will need to be trained to operate it.
- Use of a mast climber needs to be carefully planned into the design process, particularly the way that it is tied to the building, fed with materials and loaded.
- Workers may still have to bend to pick up bricks from the brick stack.
- Where the mast climber is tied to the structure, brickwork will need to be left out and made good as the access equipment is struck.



Figure 5 Lighting can be provided and the platform can be enclosed by netting to protect the workers