

## **BUILDER INFONET- FEBRUARY 2007**

### ***Free information for smaller builders and contractors working on existing domestic and commercial properties***

#### **HSE aims to help builders reduce fatal injuries on smaller sites**

The proportion of fatal injuries involving builders working on smaller sites is increasing. These deaths occur during building and refurbishment work on both commercial and domestic premises. The Chief Inspector for Construction reported recently that 75% of fatal accidents in construction now happen on smaller projects. During 2007 HSE construction Inspectors will pay increasing attention to such projects to provide advice and intervene where serious risks are not properly controlled.

#### **Pattern of fatal injuries on smaller sites**

This issue of *Builder Infonet* concentrates on major causes of death on smaller sites and the practical, sensible and effective steps that contractors can take to make a difference. By addressing these hazards you will also reduce the risk of a major injury. The attached 2 pages of photographs illustrate conditions which can lead to such deaths. The most lethal hazards include:

- Falls from height - 60% of the deaths involve falls from ladders, working platforms, roof edges and (on commercial premises) falls through fragile roofs or rooflights;
- Structures collapsing and loads falling - 15% of deaths are caused by asphyxiation or traumatic injury when excavations, walls, floors and ceilings collapse without warning and when building components fall or strike workers during both manual and mechanical lifting operations and;
- Electrocution - 10% of the deaths arise from contact with electrical systems within properties, proximity to overhead power lines and contact with underground cables external to the structure.

#### **Falls from height - major causes and practical precautions**

- *Ladders* - ladder slipping outwards or sideways, and performing work which cannot be undertaken safely from a ladder. [Click here for precautions](#);
- *Working platforms* - platforms not provided with full guardrails, intermediate rails etc, and erected by those who are not trained and competent to do so. [Click here for precautions](#);
- *Roof edges* - safe access and roof edge protection not provided. [Click here for precautions](#) and;
- *Fragile roofs and fragile rooflights* - safe system of work not in place, fragile materials unprotected and a failure to provide fall arrest systems e.g. safety nets. [Click here for precautions](#).

#### **Structures collapsing and loads falling - major causes and practical precautions**

- *Excavations* - the collapse of excavations which are not provided with adequate temporary support or battered to a safe angle of repose. [Click here for precautions](#)
- *Structures* - the collapse of walls, floors, ceilings etc which have become unstable as a result of the building work in progress. [Click here for precautions](#)
- *Movement of heavy loads* - persons struck by loads being moved, particularly when slinging or handling arrangements fail or become insecure. [Click here for precautions](#)

#### **Electrocution - major causes and practical precautions**

- *Electrical systems within the property* - contact with live conductors where the electrical supply has not been isolated effectively. [Click here for precautions](#)
- *Overhead lines and underground cables* - when plant or equipment is close to overhead lines and when underground cables are struck during excavation work. [Click here for precautions](#).

## ***Ladders and working platforms***

1 Towers not properly erected, lacking outriggers and without edge protection on the bridging staging

2 Tower not properly erected and ladder used on top of tower increases risk of collapse

3 Unsafe ladder access to an unsafe working platform lacking edge protection

4 A homemade wooden scaffold which is unstable and not provided with guard-rails etc

## ***Roof edges***

5 Failure to provide edge protection during work on a flat roof

6 Working at the unguarded edge of a pitched roof

## ***Fragile roofs and rooflights***

7 Working on a fragile roof and near fragile rooflights without protection

8 Working on a fragile roof with no stagings, safety nets or edge protection despite a warning sign on side of the building



## ***Excavations and structures***

1 A builder died when the sides of this excavation collapsed

2 This wall collapsed and caused the death of a builder who was working at the foot of the wall



## ***Movement of heavy loads***

3 Steel beams are being lifted from a vehicle whilst slung in an unsafe manner and liable to fall

4 The sling used was also defective and could have failed at any time



## **Electrocution**

### ***Electrical systems within properties***

5 A builder was electrocuted when he came into contact with this domestic 240v supply during refurbishment work.

### ***Overhead and underground conductors***

6 Overhead power lines present a serious risk when mobile plant is in close proximity to the lines or when scaffolds are being erected.

7 Underground cables can be struck during groundworks. A builder died when he came into contact with an electric cable in this excavation

