

# Fragile roofs

## Safe working practices



Information Sheet GEIS5

### Introduction

This leaflet is aimed at building owners and occupiers, construction businesses and workers – in short, anyone working on fragile roofs or having work done.

### What are the risks of working on fragile surfaces?

Falls through fragile roofs and fragile roof lights cause death and serious injury. They account for almost a fifth of all the fatal accidents which result from a fall from height in the construction industry.

### Who is in danger?

Deaths caused by falls through fragile surfaces occur mainly to those working in the building maintenance sector when carrying out small, short-term maintenance and cleaning jobs.

On average 7 people are killed each year after falling through a fragile roof or fragile roof light. Many others suffer permanent disabling injury.

These accidents usually occur on roofs of factories, warehouses and farm buildings when roof repair work or cleaning is being carried out.

### Which surfaces present a particular risk?

The following are likely to be fragile:

- old roof lights;
- old liner panels on built-up sheeted roofs;
- non-reinforced fibre cement sheets;
- corroded metal sheets;
- glass (including wired glass);
- rotted chipboard; and
- slates and tiles.

**Remember:** *Fragile roof incidents are not inevitable. They can be prevented by careful planning, using trained and experienced workers with suitable equipment and employing a high level of supervision.*

## What you should do as a building owner or occupier

Before work starts:

- Ensure that a competent person assesses the roof using a safe system of work (see below).
- Ensure the work is properly planned in advance by a contractor with sufficient expertise in working on fragile roofs.
- Specify non-fragile assemblies for new and replacement roofs.
- Satisfy yourself that the contractors have allowed sufficient time to carry out the work safely.

After work starts:

- Ensure the planned safe system of work is implemented.

## What is a safe system of work?

### *Avoidance*

Avoid workers having to go on the roof at all by adapting a method that allows profiled roof sheets or roof lights to be replaced from underneath using a suitable work platform – this may involve the use of adapted roof fixings, available from materials suppliers. The National Federation of Roofing Contractors can advise ([www.nfrc.co.uk](http://www.nfrc.co.uk)).

### *Prevention*

If the work cannot be done from underneath and workers need access to the topside of the roof:

- use a mobile elevating work platform (MEWP) that allows people to work from within the basket without standing on the roof itself.

If access onto the fragile roof cannot be avoided, mitigate fall distance and consequences:

- install perimeter edge protection and use stagings on the roof surface to spread the loads;
- ensure all the work and access stagings or platforms are fitted with guard rails;
- if this is not possible, install safety nets underneath the roof or use a harness system; and
- where harnesses are used, make sure they have adequate anchorage points and they are properly used – through appropriate discipline, training and supervision.

**Note:** *Proprietary covers, which can serve as either a temporary or a permanent installation, are available to prevent someone who is passing or working near fragile material from falling through.*

Safe systems of work must be planned and followed to protect those installing the safety measures.

## What enforcement action might be taken by HSE?

Working on fragile surfaces is extremely dangerous and the precautions are well established.

The law says you must organise and plan all roof work so it is carried out safely. If inspectors encounter failure to control risk, work will be prohibited and prosecution may follow.

## Examples of safe systems of work

### Safe systems for replacing roof sheets and roof lights from underneath



*Removing hook bolts from existing sheet*



*Locating replacement sheet*



*Securing fixings to newly installed sheet*

### **Mobile elevating work platforms**



*Using a MEWP to inspect a vent*



*Using a MEWP to clean a gutter*

### **Using netting to provide protection**



*Safety netting used to provide protection for roof lights during minor roof works*



*Covers can be fitted to existing roofs or included as part of the design  
(Image courtesy of Safesite)*

## Further reading

*Working on roofs* Leaflet INDG284(rev1) HSE Books 2008 (priced packs ISBN 978 0 7176 6288 3) [www.hse.gov.uk/pubns/indg284.pdf](http://www.hse.gov.uk/pubns/indg284.pdf)

*Health and safety in roof work* HSG33 (Fourth edition) HSE Books 2012 ISBN 978 0 7176 6250 0 [www.hse.gov.uk/pubns/books/hsg33.htm](http://www.hse.gov.uk/pubns/books/hsg33.htm)

*Safe working on fragile roofs or roofs with fragile elements* ACR(CP) 002: 2012 (The Green Book) Advisory Committee on Roofsafety [www.roofworkadvice.info](http://www.roofworkadvice.info)

*Planning minor works* Information Sheet No 3: 2012 Advisory Committee on Roofsafety [www.roofworkadvice.info](http://www.roofworkadvice.info) (aimed at clients and building owners)

## Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit [www.hse.gov.uk/](http://www.hse.gov.uk/). You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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