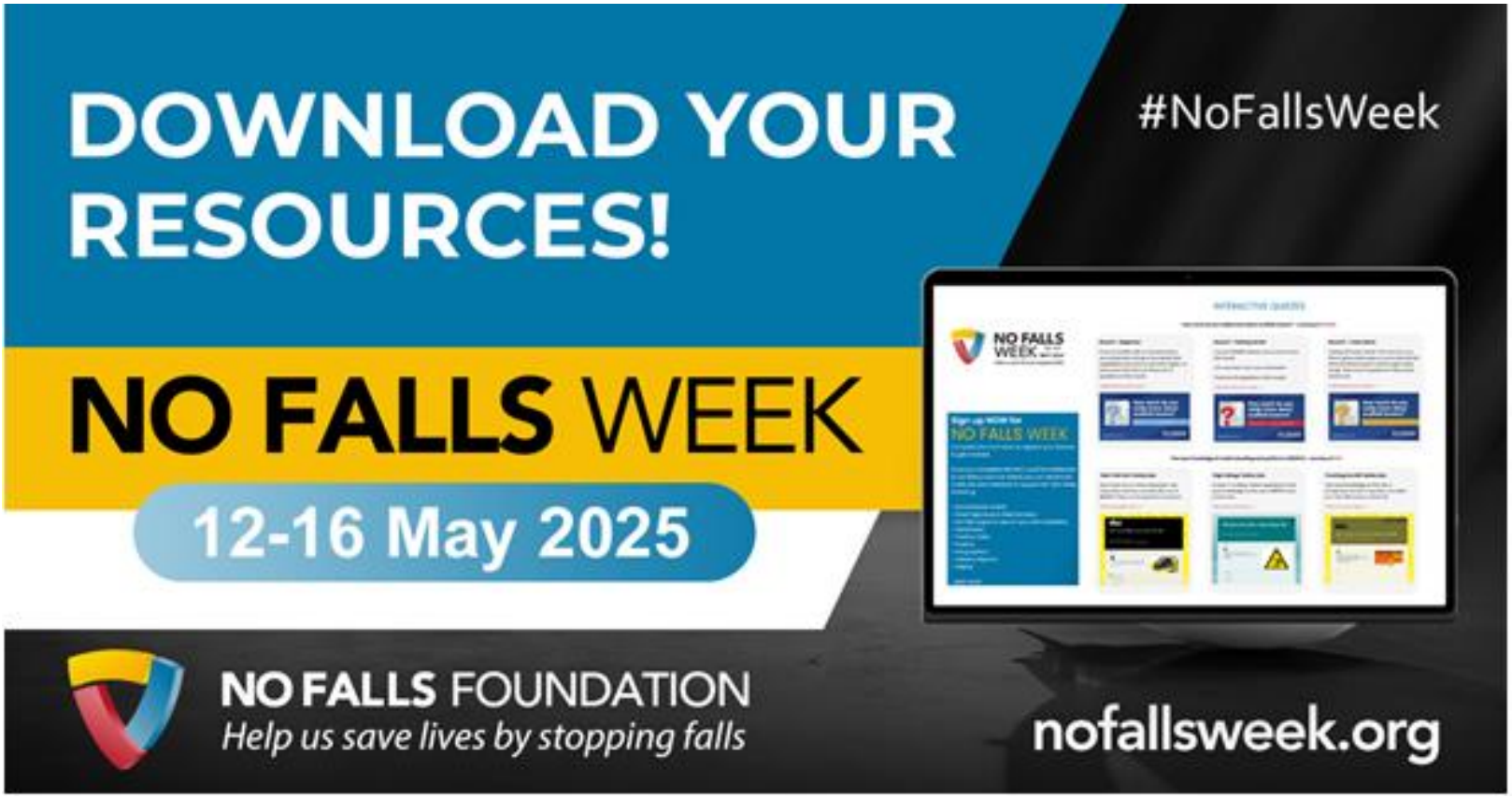
Sharing Best Practice
Work at Height Safety

Stewart Morrison – SHBHSF Chair

Work at Height



Work at Height

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Downloads – No Falls Week

Work at Height – Crane Erect Roofs

Work at Height – Issue?

Work at Height – Loading Out

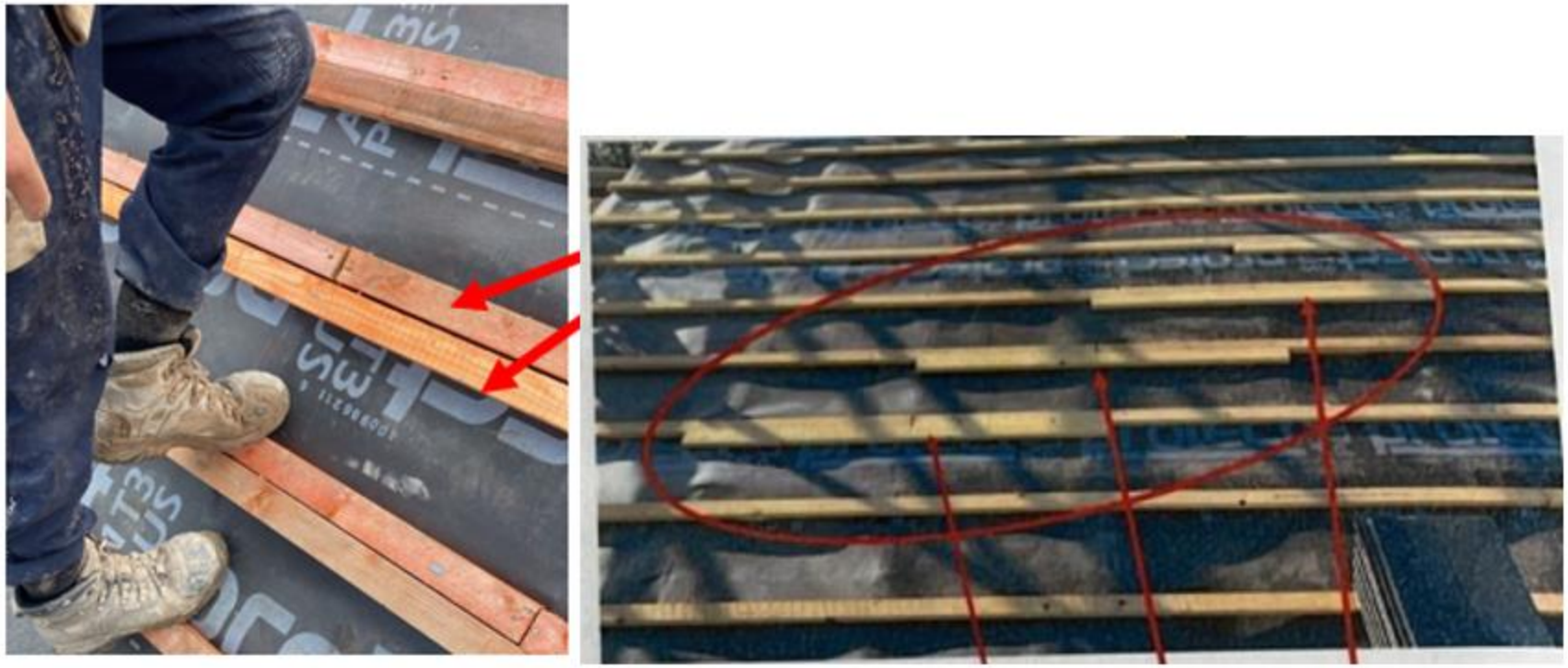
Work at Height – Systems of Work

Open truss system with progressive install of wrap a round system working up the roof

Trellis decking installed into trusses

Safety decks underneath trusses

Work at Height



Double up of timber battens or partial double up at joints

Work at Height

HSE has been asked for comment on the legal requirements on controlling the risk of a fall internally through the rafters during the installation of the roof on timber kit housing

An HSE Inspector will not formally approve one certain way of working as legally compliant especially where the legal requirement is not an absolute duty with a standard defined in law

Health and Safety Law is based on foreseeable risk and in any enforcement action where that foreseeable risk exists, then the onus is on the duty holder to show that they did all that was reasonably practicable

Work at Height

What would HSE expect?

The Sub-Contractor doing the work would need to assess the risk of an internal fall, identify if that risk is foreseeable and if yes, then establish and implement measures to control that risk, either preventing or mitigating the risk

The Principal Contractor, if stipulating a work method, will need to assess the risk of an internal fall using that method, identify if that risk is foreseeable and if yes establish and implement measures to control the risk, either preventing or mitigating the risk.

As there is no defined standard in law for controlling the risk of an internal fall, the control is covered by so far is reasonably practicable. HSE and Industry guidance can provide examples of what is reasonably practicable – these are deemed by HSE as Established Standards

Work at Height – HSE Guidance

HSE

Health and safety in roof work

Health and safety in roof work (Fifth Edition)

You can buy this book at **https://books.hse.gov.uk/**

This is a web version of the printed edition Health and safety in roof work (Fifth Edition).

Working on roofs is a hazardous activity because it involves working at height. Roof work accounts for a quarter of all deaths in the construction industry. Falls through fragile materials, such as roof lights and asbestos cement roofing sheets, account for more of these deaths than any other single cause. Not all the people killed while working on roofs are trained roofers: many people accessing roofs are maintenance workers. There are also many serious injuries, often resulting in permanent disabilities.

HSG 33 Health and Safety in Roof Work covers working over open rafters –150 - 152.

150 You must consider and address the risk of people falling through the open rafters when fixing tile support systems or when laying underlay and fixing battens.
151 This is achieved by following the work-at-height hierarchy and putting in place measures that prevent a fall where it is reasonably practicable to do so. Where it is not reasonably practicable to prevent a fall, you must provide measures that mitigate the distance and consequences of a fall.
152 What is reasonably practicable will differ between new-build properties and strip and re-cover roofing jobs. Some examples of reasonably practicable measures include the following, although this list is not exhaustive:

- *boarding out the inside of the roof using timber (see Figure 22);*
- *using proprietary decking systems (see Figure 14(a));*
- *inserting airbags or beanbags (see Figures 14(b) and (c));*
- *installing a safety net; or*
- *using boards in conjunction with a safe system of work.*

Work at Height – Industry Guidance

NFRC
Health & Safety Guidance (HSGS15)

NFRC
LEADING ROOFING EXCELLENCE

Internal fall protection requirements for pitched roofs on new build homes

Falls from height remain one of the biggest causes of accidents and fatalities in construction, therefore it is important that the hierarchy of fall protection set out in the Work at Height Regulations 2005 is followed at all times.

Home builders constructing new homes should install internal fall protection to protect the workers installing roof coverings from injuring themselves while working above open roof trusses. Types of internal fall protection include proprietary decking systems or air bags/bean bags as soft-landing systems.

Following an investigation with our members, it was noted that some UK House Builders allow internal fall arrest systems to be removed once the roof is felted and battened; unfortunately though this only addresses one aspect of the risk involved.

Although operatives are instructed and trained to only walk where the tile battens are attached to the trusses, it is possible for the operative to lose their balance and place their foot mid-span of the truss to prevent them from falling over. This risk increases further when the roof is being loaded out with roof tiles, because the operative is stood in the upright position along the truss line, while walking up the roof carrying the roof coverings.

In the event that a roof batten broke under the weight of an operative, there is only the strength of the underfelt membrane to prevent the operative falling through into the roof void, and as such the potential risk of injury remains high.

The NFRC therefore recommends that the internal fall protection is not removed by the home builder or main contractor until it is safe to do so; ideally when the roofing works have been completed, but as a minimum when the roof has been felted, battened and completely loaded out.

At no point would we advocate that the internal fall protection be removed before this point, unless the risk assessment deems that it is safe to do so.

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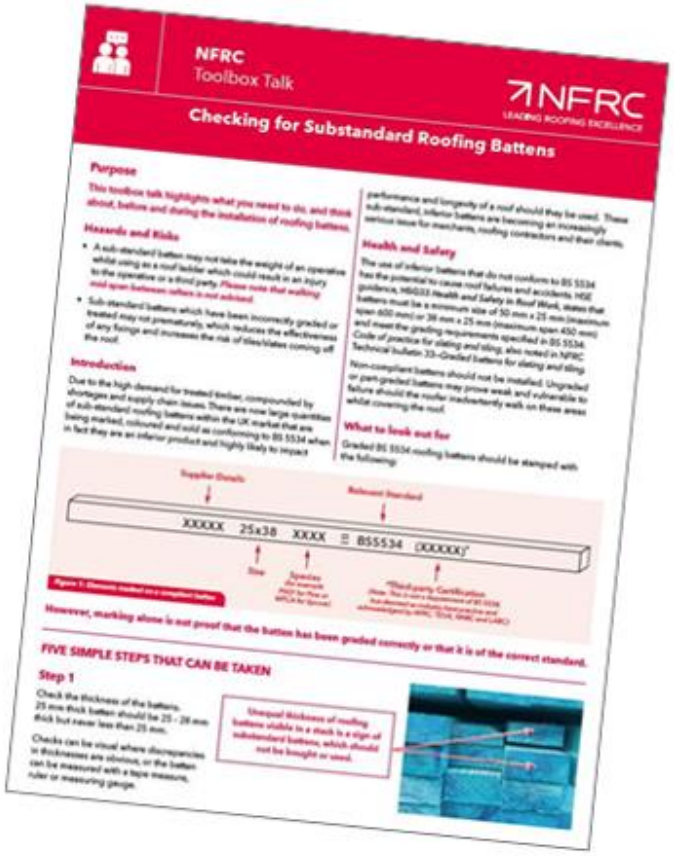
Work at Height – Industry Guidance

Batten Safety

BS 5534 graded battens may be used as an alternative to roof ladders in line with current guidance in the Health and Safety Executive's HSG 33 "Health and Safety in Roof work" and INDG 284 "Working on Roofs".



NFRC
Toolbox Talk

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Checking for Substandard Roofing Battens

Purpose

This toolbox talk highlights what you need to do, and think about, before and during the installation of roofing battens.

Hazards and Risks

- A sub-standard batten may not take the weight of an operative whilst using as a roof ladder which could result in an injury to the operative or a third party. *Please note that walking mid-span between rafters is not advised.*
- Sub-standard battens which have been incorrectly graded or treated may not prematurely, which reduces the effectiveness of any fixings and increases the risk of tiles/slates coming off the roof.

Introduction

Due to the high demand for treated timber, compounded by shortages and supply chain issues. There are now large quantities of sub-standard roofing battens within the UK market that are being marked, coloured and sold as conforming to BS 5534 when in fact they are an inferior product and highly likely to impact performance and longevity of a roof should they be used. These sub-standard, inferior battens are becoming an increasingly serious issue for merchants, roofing contractors and their clients.

Health and Safety

The use of inferior battens that do not conform to BS 5534 has the potential to cause roof failures and accidents. HSE guidance, HSG33 *Health and Safety in Roof Work*, states that battens must be a minimum size of 50 mm x 25 mm (maximum span 600 mm) or 38 mm x 25 mm (maximum span 450 mm) and meet the grading requirements specified in BS 5534: *Code of practice for slating and tiling*, also noted in NFRC Technical bulletin 33–Graded battens for *slating and tiling*.

Non-compliant battens should not be installed. Ungraded or part-graded battens may prove weak and vulnerable to failure should the roofer inadvertently walk on these areas whilst covering the roof.

What to look out for

Graded BS 5534 roofing battens should be stamped with the following:

However, marking alone is not proof that the batten has been graded correctly or that it is of the correct standard.

FIVE SIMPLE STEPS THAT CAN BE TAKEN

Step 1

Check the thickness of the battens. 25 mm thick batten should be 25 - 26 mm thick but never less than 25 mm.

Checks can be visual where discrepancies in thicknesses are obvious, or the batten can be measured with a tape measure, ruler or measuring gauge.

Unequal thickness of roofing battens visible in a stack is a sign of substandard battens, which should not be bought or used.

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Work at Height - Discuss

- What Systems of Work Are We Using?