



## Scaffolding & Access Industry Update 2010

**safety & access ltd**

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 Joint Managing Director  
[www.safetyaccess.co.uk](http://www.safetyaccess.co.uk)

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## Who are Safety & Access Ltd?

**safety & access**

**Training & Competence**

- Established UK and International training providers specialising in access and scaffolding and construction trades including CISRS, PASMA, UKATA, SMSTS & SSSTS

**safety & access**

**Consultants**

- Nationwide Health & Safety Consultants.
- Independent Scaffold Inspections
- Supply Chain Management & Assessment
- Site Monitoring & Support

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## *Focus on Scaffolding!*

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At Rotherham Magistrates Court today a scaffolder, was fined £7,500 plus costs of £12,500, following the collapse on 10 November 2005. He pleaded guilty to breaching Section 3(1) of the Health and Safety at Work etc. Act 1974 (the HSW Act) and Regulation 8 of the Work at Height Regulations 2005.

## Jailed scaffolder ignored HSE notices

**Work at height**

THE OWNER of a scaffolding firm is serving three months in prison after one of his employees fell six metres from scaffolding.

The worker had not been trained, even though the HSE had warned Philip Wolstenholme, owner of Rotherham-based A1 Access Scaffolding, about allowing untrained workers to dismantle scaffolding just months earlier.

The incident happened in January 2007, when Wolstenholme instructed employees Scott Mitchell and Tony Moore to take down a scaffold at a house in Sheffield.

A poorly supported board snapped as Mitchell walked across it and he was thrown to the ground, suffering two fractured vertebrae and a shattered heel. He had two pins and two screws inserted in his back.

"There was a harness available in the van," HSE inspector Robert Cooper told HSW, "but as neither worker had been trained, they wouldn't have recognised when to use it, how to use it, or the benefits of using it."

Cooper said Wolstenholme had "willfully disregarded" HSE advice after two previous incidents. In November 2005, the HSE served Wolstenholme with an Improvement Notice after a scaffold he provided for a roofing contractor at a house in Rotherham collapsed. The roofer fell to the ground, suffering ankle and shoulder injuries, and his mobility is still impaired. The notice required Wolstenholme to ensure workers were competent to do the job and that scaffolding was properly inspected. In March 2006, a complaint about substandard scaffolding led the HSE to serve Wolstenholme with a Prohibition Notice requiring him to properly train employees before allowing them to assemble or dismantle scaffolding.

On 7 May, Wolstenholme pleaded guilty to breaching Sections 2(1) and 33(1)(g) of the Health and Safety at Work Act for failing to take reasonable steps to ensure employees' safety and contravening a Prohibition Notice. He was sentenced at Sheffield Crown Court on 23 June. The judge told Wolstenholme: "This is the most blatant breach of the Prohibition Notice, doing that which you have been expressly forbidden from doing."

**Lessons learnt?**

Wolstenholme drew HSE attention when a scaffold collapsed in Rotherham

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## Spotlight on Scaffolding!

Safe Working?



- Major Scaffolding Collapse Milton Keynes
- 20 Injuries, 3 Major injuries including 1 Fatal
- HSE multiple prosecution...

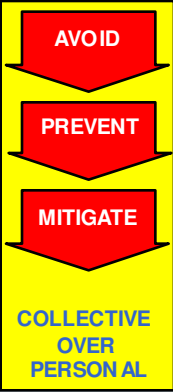
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Industry Update –

## New and Revised Scaffold & Access Key Industry Guidance

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## Work at Height Regulations - Hierarchy



- Avoid Work at Height?
- Most suitable method of working and equipment to prevent falls
- Both the consequences and distance of a potential fall must be minimised
- At all stages you must consider COLLECTIVE protection over PERSONAL protection...

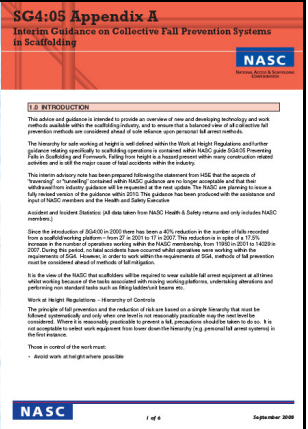
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- Revision to SG4:05
- Five year cycle.
- Published by end of 2010
- Emphasis on Collective Fall Prevention



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- SG4:05 Appendix A
- New Interim Guidance
- Available FOC



[http://www.nasc.org.uk/Guidance/Health\\_and\\_Safety](http://www.nasc.org.uk/Guidance/Health_and_Safety)


### Facts

- Since the introduction of SG4:00 in 2000 there has been a 40% reduction in the number of falls recorded from a scaffold/working platform - from 27 in 2001 to 17 in 2007.
- This reduction is in spite of a 17.5% increase in the number of operatives working within the NASC membership, from 11950 in 2001 to 14029 in 2007.
- During this period, no fatal accidents have occurred whilst operatives were working within the requirements of the SG4 safe system of work.




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**Background** The interim advisory note has been prepared following the statement from HSE that the aspects of “traversing” or “tunnelling” contained within NASC guidance SG4:05 should be phased out from industry guidance at the next update. The NASC are planning to issue a fully revised version of the guidance within 2010.



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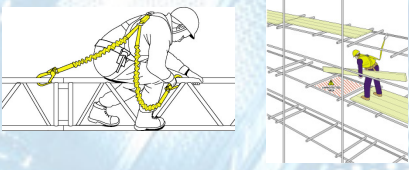
**System of Work**



❑ Operatives are *at risk* when traversing with materials without the protection of a guardrail or attachment of fall arrest equipment.

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**Good practice;**  
 It is the view of the NASC that scaffolders will be required to wear suitable fall arrest equipment at all times whilst working because of the tasks associated with moving working platforms, undertaking alterations and performing non standard tasks such as fitting ladder/unit beams etc.



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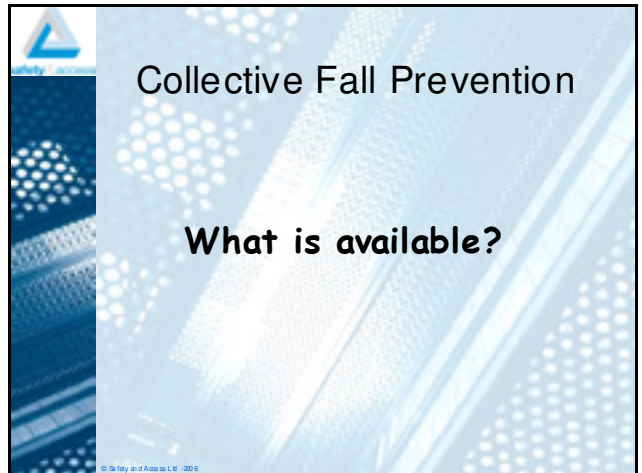
**Practical Applications**

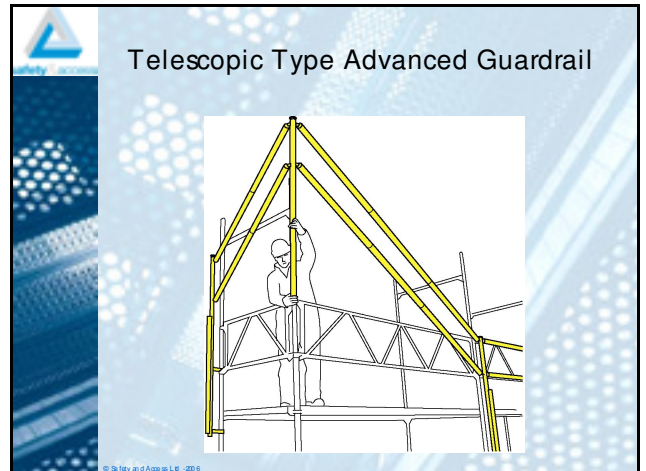
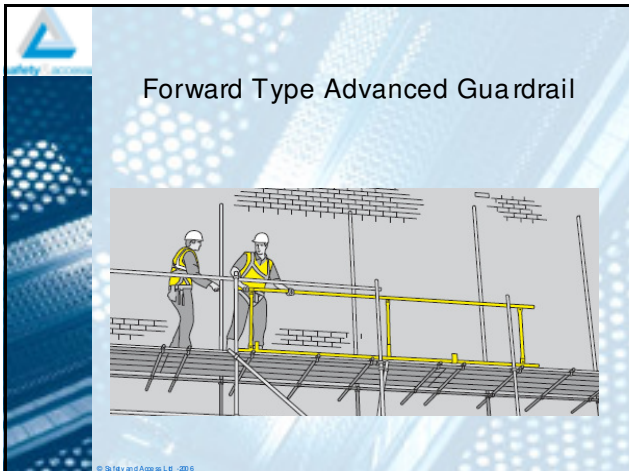
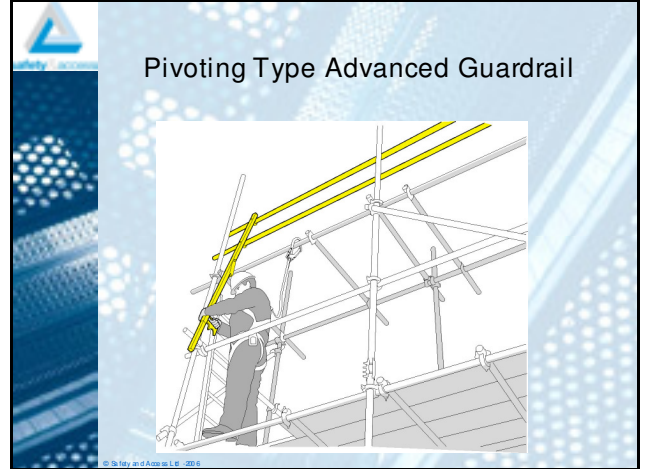
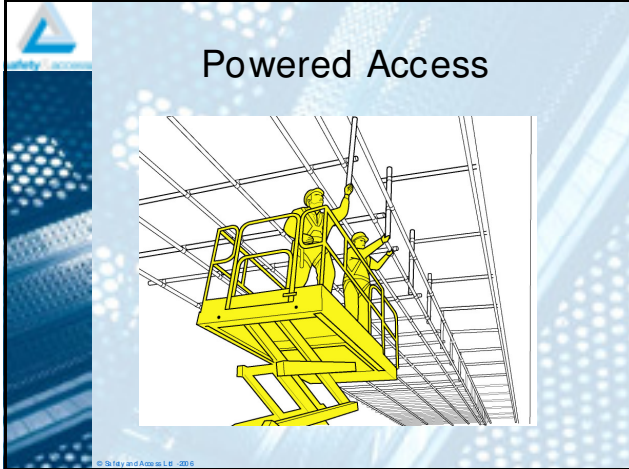
Avoiding Work at Height & Preventing Falls

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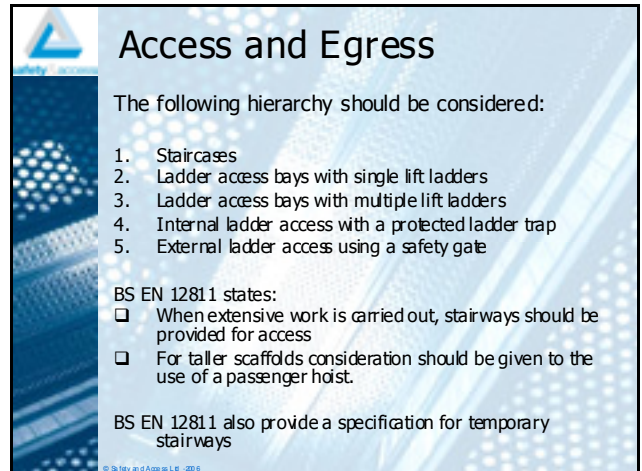
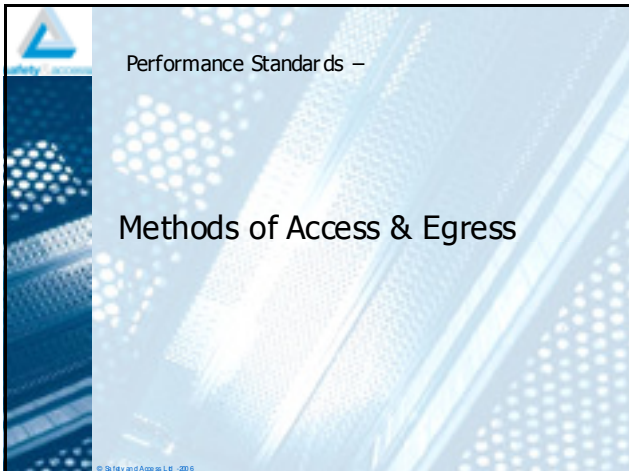
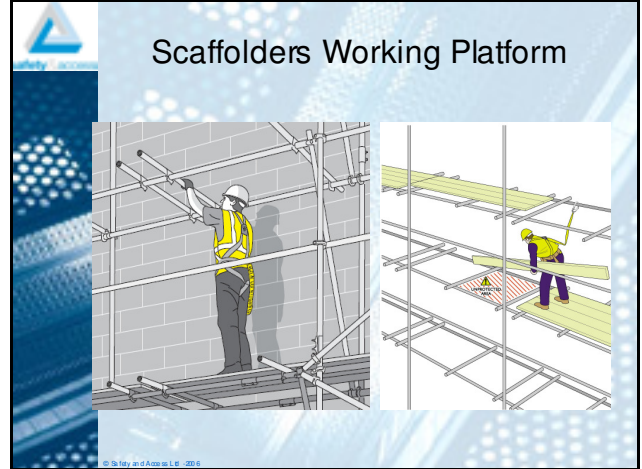
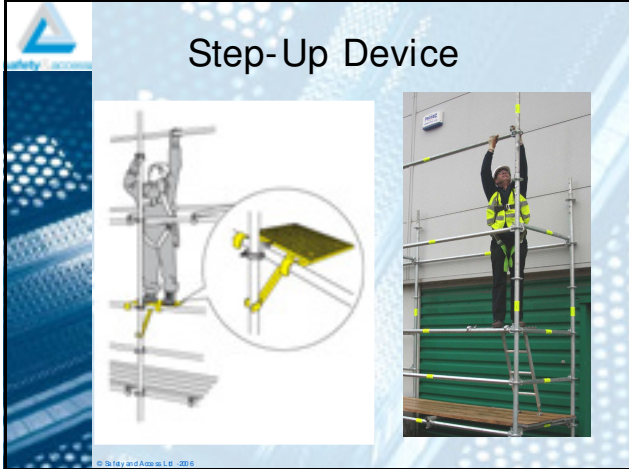


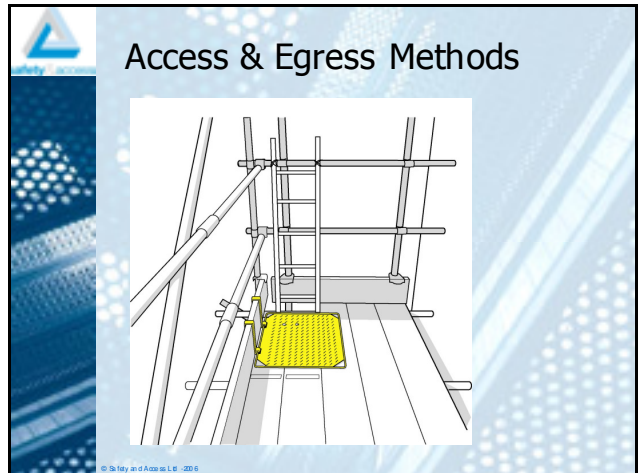
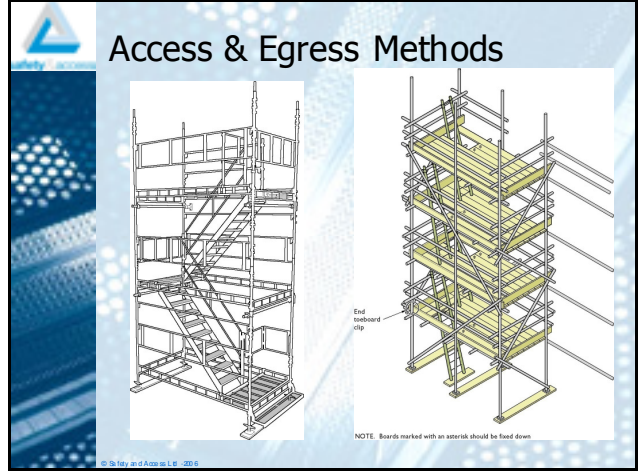














 Access & Egress Methods




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 Access & Egress Methods




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- SG4 DVD.....
- Basic System of Work for Scaffolders...

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Statutory Scaffold Inspection

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## Scaffold Inspection – Competence

Legislation specifies that anyone carrying out an inspection must be competent to do so.

As a minimum :

- a) A **CISRS Scaffolder** cardholder would be deemed competent to inspect the scaffold structures that are covered in the CISRS Part 1 & Part 2 courses provided their employer can demonstrate they have the necessary knowledge and experience.
- b) A **CISRS Advanced Scaffolder** cardholder would be deemed competent to inspect the scaffold structures that are covered in the CISRS Part 1, Part 2 & Advanced courses provided their employer can demonstrate they have the necessary knowledge and experience.


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- d) A person who has been on a **Basic Scaffold Inspection Course** (min. two days) would be deemed competent to inspect a basic scaffold structure provided their employer can demonstrate they have the necessary knowledge and experience and they have passed the knowledge test at the end of the course.
- e) A person who has been on an **Advanced Scaffold Inspection Course** (min. two days) would be deemed competent to inspect more complex scaffold structures provided their employer can demonstrate they have the necessary knowledge and experience and they have passed the knowledge test at the end of the course.
- f) Persons who are required to carry out inspections of System Scaffolds must in addition to the basic scaffold inspection course, attend an approved product training course for the specific system scaffold required

**Note:** Any competent person who is not carrying out scaffold inspections on a regular basis would need to consider additional refresher training


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## TG20:08




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## BS EN 12811

Temporary works equipment – Part 1: Scaffolds

- European Standard
- Introduced in the UK in June 2004
- BS5973 immediately withdrawn by BSI
- NASC Introduce TG20:05 Guide to good practice for scaffolding with tube and fitting



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## TG20:08


A recent statement from the HSE has advised the scaffolding industry that time is now running out for the continued use of BS5973:



**"As from 1st January 2011 the Health and Safety Executive will no longer acknowledge BS5973:1993 as a recognised standard for the design of tube and fitting scaffolding structures"**

Philip White, Chief Inspector of Construction, HSE

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## New TG20:08

- HSE & NASC considered changes
- Principles of BS 5973 remain unchanged
- TG20 in two volumes
- Volume 1 info on scaffolds for whole of British Isles
  - Basic scaffolds for which no further design needed
  - Guidance on erection/dismantling, use & inspection
- Volume 2 gives technical info and advice required for design of scaffolds outside range of Volume 1..

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## Benefits of using TG20:08

- Wider scope than 5973
- Covers all UK, 5973 did not include Scotland
- Supported by test calculations based on custom & practice
- More practical and workable than 5973
- Retains ledger bracing every other bay
- Façade/sway brace every 6 bays
- Shows debris net & sheeted scaffolds separate, max heights well above those in 5973
- Wider range of tie patterns to achieve max heights
- Return to light duty loading on inside boards
- Guidance on Putlog Scaffolds

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**TG20:08 Standard Scaffolds (Independent Tied Scaffolds)**

- All scaffolds designed, except “Basic Scaffolds”
- 1 working platform loaded 100%, 1 50% of service load
- Ledger brace to alternate standards
- Inside boards lightly loaded
- Scaffold designation that describes load classes and number of boards in table 1

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**Table 1** Load classes for independent tied scaffolds

Load Class	Duty	Uniformly Distributed Load on Platform (kN/m <sup>2</sup> )	Nominally (kg/m <sup>2</sup> )
1	Very Light Duty	0.75	75
2	Light Duty	1.50	150
3	General Purpose	2.00	200
4	Heavy Duty	3.00	300

**3-4-2S**

- 3**= load class
- 4**= 4 boards between standards
- 2**= 2 inside boards
- S**= class 3 (GP) scaffold with bay length of no greater than 1.8m

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**The Main Differences | Load Classes**

TG20:08 covers 4 load classes only:

LOAD CLASS	DUTY	UNIFORMLY DISTRIBUTED LOAD ON PLATFORM
1	Very Light Duty	0.75kN/m <sup>2</sup> (nominally 75kg/m <sup>2</sup> )
2	Light Duty	1.50kN/m <sup>2</sup> (nominally 150kg/m <sup>2</sup> )
3	General Purpose	2.00kN/m <sup>2</sup> (nominally 200kg/m <sup>2</sup> )
4	Heavy Duty	3.00kN/m <sup>2</sup> (nominally 300kg/m <sup>2</sup> )

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**TG20:08 Standard Scaffolds (Independent Tied Scaffolds)**

- Façade bracing fitted, either
  - Continuous full height every 6 bays to the top, or
  - Fitted over 1 or 2 bays in every 6 as a zigzag to the top of the scaffold
- Plan bracing not required if façade bracing fitted across 2 ledger braced bays or continuous
- All other cases over 8m high plan brace required bracing between ties or ledger braced frames every 12 bays and 4 lifts

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### TG20:08 Façade Bracing

Figure 3 - Typical bracing arrangements for a standard scaffold

Note: (a) For tie and end tie fastenings, the following level of tie should be used:

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### TG20:08 Standard Scaffolds (Independent Tied Scaffolds)

- Lift heights at 2.0m, pavement lift height of 2.7 m
- Basic scaffolds only have 2 tie layouts
  - ❑ Ties at every lift, or
  - ❑ Ties at alternate lifts

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### TG20:08 Tie arrangements

Figure 5 - Typical arrangements of ties

Note:

1. See section 2.1.1
2. The standard tie should be used independent of the edge bracing details. See Chapter 11.1.1.2.1.2.2.2.
3. The standard tie should be used independent of the edge bracing details. See Chapter 11.1.1.2.1.2.2.2.2.
4. The standard tie should be used independent of the edge bracing details. See Chapter 11.1.1.2.1.2.2.2.2.
5. The standard tie should be used independent of the edge bracing details. See Chapter 11.1.1.2.1.2.2.2.2.

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### TG20:08 Tie arrangements

Figure 4 - Typical 4-4-1 post braced and fully braced independent tied basic scaffolds

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## TG20:08 Basic Scaffolds

Basic scaffolds can be constructed to the safe height shown in this guide if they are constructed as follows:

- Standard independent tied scaffold
- Load classes, max bay lengths & scaffold width conform to table 1
- Only loaded on 2 platforms only
  - 1 at load for class from table 1
  - 1 at 50% of that load
- Lift height 2m, except 1<sup>st</sup> lift 2.7m
- If 1<sup>st</sup> lift more than 2m must be tied
- Scaffold not loaded by forklift
- Alternate standards tied to building
- Min 50% ties to ledger braced standards
- Max of 2 lifts or 4m vertically between lines of ties
- Max between line of ties 4 lifts or 4 bays
- Facade brace fitted
- Plan brace every 12 bays & 4 lifts unless facade brace over 2 bays
- When sheeted or netted fitted to outside face of ledgers/guardrails & top platform tied to alternate standards
- All other forms of scaffold to be subject to design!

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## Max height calculation for Basic Scaffolds = S

Calculate S, the wind factor, from

$$S = V_b \times T \times \left(1 + \frac{A}{1000}\right)$$

- V<sub>b</sub> = wind speed from map
- T = topography factor
- A = altitude in metres above sea level

This value of S is sufficient for use in tables 2,3 & 4 to determine minimum safe height

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## Topographical Factor (T)

(a) Nominally flat

(b) Hills and ridges less than 1:5

(c) Cliffs and escarpments less than 1:5

(d) Hills and ridges greater than 1:5

(e) Cliffs and escarpments greater than 1:5

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**Overview**

- Fundamentally, the principles of BS 5973 remain unchanged and there are very few changes in the day-to-day work of a scaffolder. Although the scope of TG20:08 is generally wider than in previous guidance, it is the justification of the design that has altered rather than the scaffold structure itself.
- While dealing with many common applications, TG20:08 defines a range of scaffolds, referred to as '**Basic scaffolds**', for which no further design is required to establish the capability of the scaffold.

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**Safe System of Work for Scaffolding associated with Timber Frame Building Construction**

SG28:09  
Safe System of Work for Scaffolding associated with Timber Frame Building Construction

NASC

1 of 8 August 2009

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**Safe System of Work for Scaffolding associated with Timber Frame Building Construction**

- Detailed Design
  - Required
- Stability
  - Kent edge
  - Buttress
  - Ties
- Internal Service Gap
  - Planning
  - Handrails
  - System of Work

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**SG06:10 Manual Handling in the Scaffolding Industry**

- Planning
- Mechanical Handling
- Access to the Workplace
- Manual handling techniques
- Training

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**SG30:09 Working from Vehicles**

**SG30:09**  
Working from Vehicles

**NASC**

**1. INTRODUCTION**

The NASC standard for Work from Vehicles (published in 2007) is intended to reduce the likelihood of injuries and claims caused by lifts from vehicles across all activities.

The standard is based on the latest work of the industry on the use of lifts from vehicles. It is intended to provide a clear and concise set of guidelines for the safe use of lifts from vehicles. It is intended to provide a clear and concise set of guidelines for the safe use of lifts from vehicles. It is intended to provide a clear and concise set of guidelines for the safe use of lifts from vehicles.

**2. THE WORK AT HEIGHT REGULATIONS**

The working principle of the Work at Height Regulations (2005) is that employees must not do any task if it is necessary to undertake general safety. This includes the following:

- Only workers must be trained.
- Only workers must be trained.
- Only workers must be trained.

**NASC** 1 of 4 January 2009

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**SG30 :09 Working from Vehicles**

- Work at Height
  - Risk Assessment
  - Protection measures
- Mechanical Loading
  - Avoid getting on and off vehicle
- Safe Access onto the Vehicle
- Safe Loading & Stacking of Materials on Vehicles

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**SG31:09 Management of Slips and Trips**

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**SG31:09 Management of Slips and Trips**

- Biggest cause of lost time injury in the scaffolding industry
- Risk Management of the Workplace
- Identify Control Measures
  - Liaison with client/main contractor

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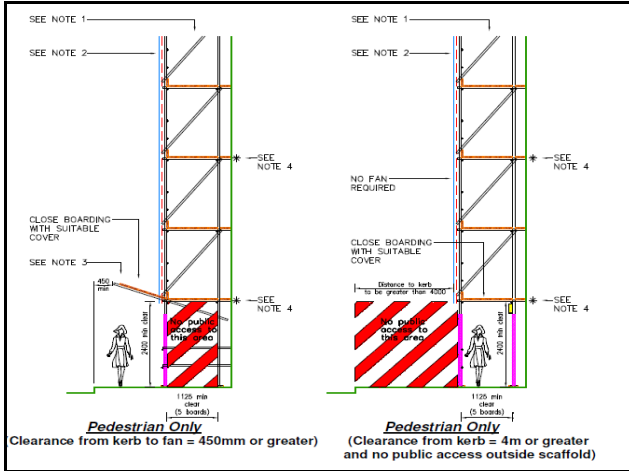
Common Hazards	Considerations	Potential Control Measures
Discouraged conditions / working platforms	Type & condition Gaps, exposed / loose boards Tripping ends Storage of excess material	Appropriate selection for prescribed work activity Monitoring, inspection & maintenance policy Signage, securing edges Suitable materials & boards secured as appropriate Maintenance / housekeeping policy Clear up areas as instructed Education / training Review of work practices
Material Handling	Wetness ground, obstacles	Manual handling assessment Lifted / load control close to task
Stairs	Design/condition	Handrails/steps, staircase to be completed as first choice Lighting
Obstacles	Obstruction to emergency work/escape	Storage facilities/overflows design Clear & clean evacuation policy Systematic & regular housekeeping
Unlevel surfaces	Change in surface Reinforcement Outdoor parking/exit paths	Warning signs Handrails Clearing walkways Assessment for slippery conditions Lighting
Office / work cabin furniture	Protein Inappropriate use	Maintenance policy Provide stable steps for climbing
Weather conditions	Excessive wind, wet paths, rain Ice, frost/slip, rain	Maintenance policy Inspection policy as appropriate Clearing Warning signs Maintenance protection
Footwear	Slips, penetration wounds	Slip resistant sole material with a good tread pattern Insulated from edges with good area of contact area in industrial settings Adequate support A choice that comfortable as relevant to the tasks i.e. safety boots, flat trainers etc.

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**National Scaffold Pavement Licence Template**

- Presented to local authorities Nationwide
- Encourages shared best practice for the protection of the public and others.
- Outlines responsibilities of the Client, LA, and sub contractor.
- Outlines standard solutions.

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Industry Update

Competence

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CISRS Scaffolder Card

- Card Valid for 5 Years
- Established trade competency for the scaffolding industry, it enables Scaffolders to supervise, lead or partake in the majority of scaffolding operations, as covered by this training and assessment.

Construction Industry Scaffolders Record Scheme  
CISRS  
MR A SAMPLE  
Registration No: 000000001  
Expiry Date: End Jan 2020  
SCAFFOLDER

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CISRS Scaffolder Card

- Card renewable with a current H&S Test (or recognised exemption).

Construction Industry Scaffolders Record Scheme  
CISRS  
MR A SAMPLE  
Registration No: 000000001  
Expiry Date: End Jan 2020  
SCAFFOLDER

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**System Scaffold Product Training Scheme (SSP TS)**

- System product training for existing QSRS Card Holders (min. Part 1)
- 2-Day Product Training Course
- Not available to new entrants
- Card endorsed with specific product (e.g. Cuplok)

The authenticity of this card can be checked by telephoning 0175 4177 203

Registration No. 8800000  
Part 1 (Tube and Fitting)  
Part 2 (Tube and Fitting)  
System Scaffold Product Training Layer  
System Scaffold Product Training Knowledge  
SWIG Level 2

The cardholder has met the Health and Safety Awareness requirements as laid out in the CSCS Scheme Booklet  
CSCS is a registered Certification Mark

Expiry Date: End Jan 2008

**SCAFFOLDERS**

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**CISRS Scaffold Inspection Course**

- Two day Basic and Advanced Courses
- Attendance now can be added to a CISRS Card.

The authenticity of this card can be checked by telephoning 0175 4177 203

Registration No. 8800000  
Part 1 (Tube and Fitting)  
Part 2 (Tube and Fitting)  
System Scaffold Product Training Layer  
System Scaffold Product Training Knowledge  
SWIG Level 2

The cardholder has met the Health and Safety Awareness requirements as laid out in the CSCS Scheme Booklet  
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**Questions?**

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