NASC

NATIONAL ACCESS & SCAFFOLDING CONFEDERATION

NASC TG20:13

SETTING THE INDUSTRY STANDARDS IN SCAFFOLDING

SIMIAN RISK GROUP

Implementing TG20:13

by Simon Hughes, Simian Risk

Impact of TG20:13

- A new suite of guidance, not merely a revision
- Changes are far reaching, effecting most common scaffolds
- Most significant change to impact the industry for years

Work at Height Regulations 2005

Schedule 3 – part 2 additional requirements for scaffolding

7) Strength & stability calculations for scaffolding shall be carried out unless…

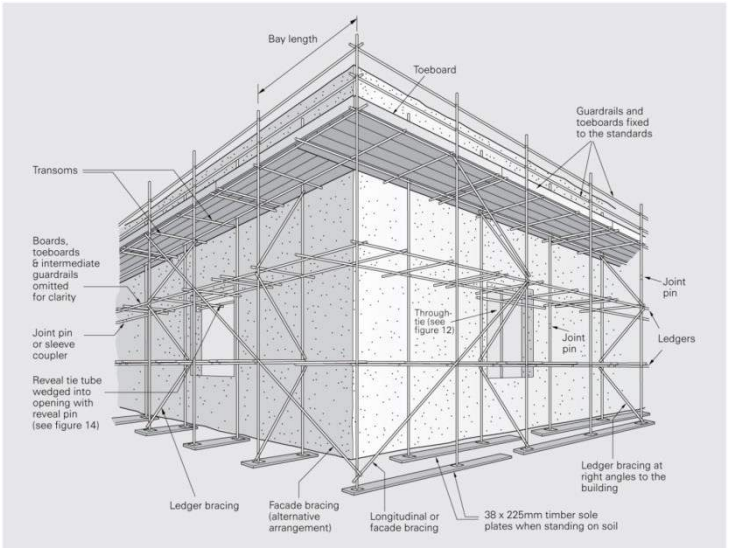
   a) A note of calculations, covering the structural arrangements contemplated is available; or

   b) It is assembled in conformity with a generally recognised standard configuration.

Impact of TG20:13

Previously…

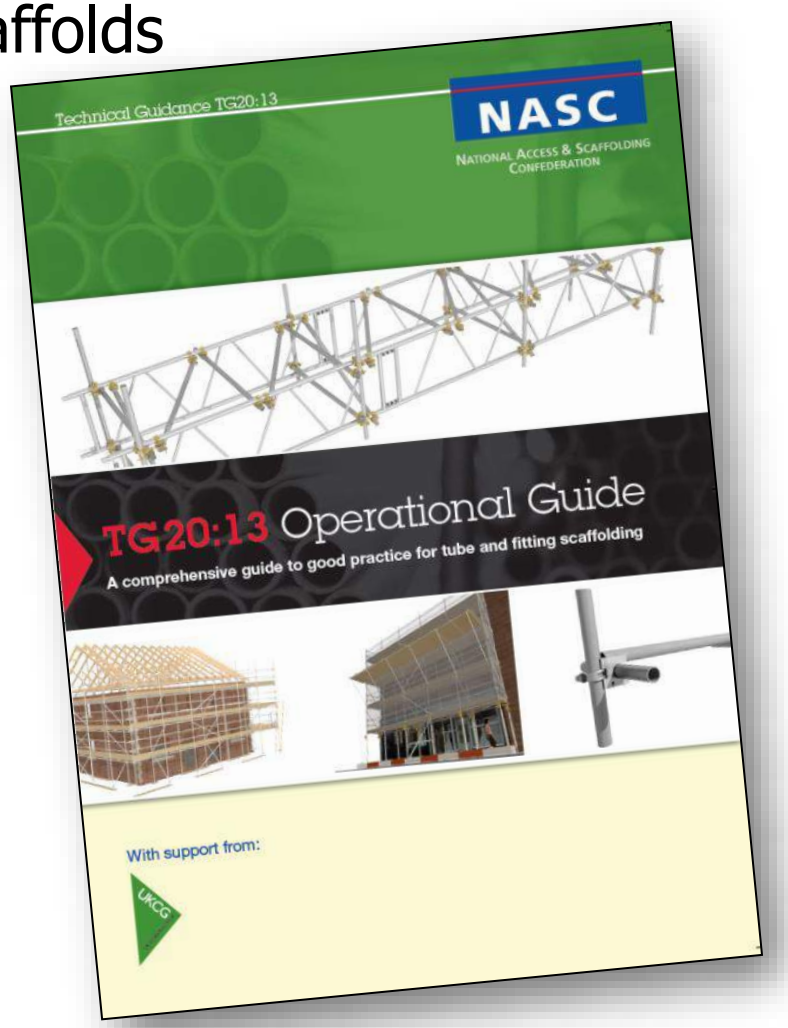
- Narrow scope of basic scaffolds
- Legal compliance
- General awareness
- Client demands
- Design burden
  - Long lead times
  - Spiralling design costs



Impact of TG20:13

NASC Objectives

- Expand the scope of standard scaffolds
- Reflect the needs of today's scaffolding industry
- Reduce the design burden
- Improving lead times and remove unnecessary costs
- Achieve compliance



HSE Support

'The *Work at Height Regulations 2005* require that strength and stability calculations are carried out for scaffolds unless they conform to a recognised standard…

…HSE is pleased to acknowledge that TG20 has been written by NASC to provide such a standard…'

Heather Bryant, Chief Inspector of Construction
Health and Safety Executive

UKCG Support

'We applaud and support the work of the NASC which will no doubt result in safer scaffolding…

The UKCG recommend the adoption and standardised use of TG20:13… both within and outside the construction sector.'

Stephen Ratcliffe,

Director UK Contractors Group

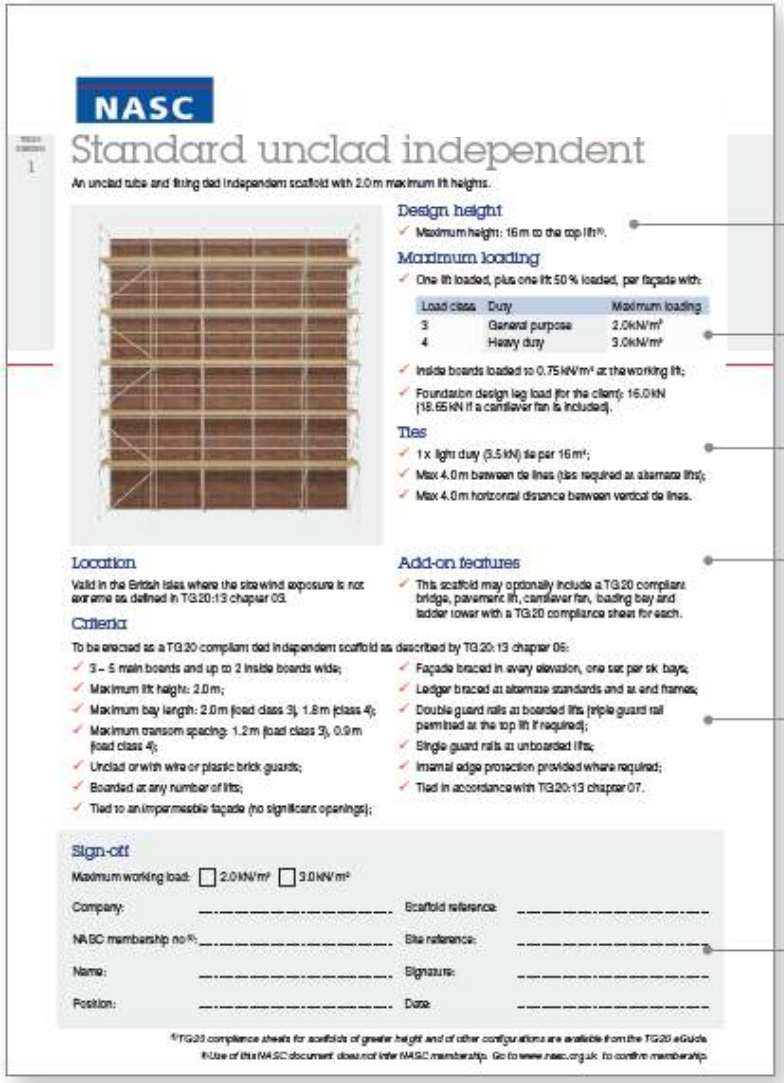
Principal Changes

- Expanded Scope of ‘Basic Scaffolds’
- To become known as ‘Compliant Scaffolding’
- TG20 Compliance Sheets
  - Chapter 3 common range of scaffolds
  - TG20 e-Guide extents the range
- Revolutionary e-Guide software
- Otherwise scaffold must be designed

TG20 Compliance Sheets

- Demonstrates compliance and that bespoke design is **not** required.

- Predicted to become the default addendum document for scaffolding:
  - RAMS
  - Pre-start briefings
  - Handover
  - Inspection
  - Auditing
  - Accident Investigation



NASC

Standard unclad independent

An unclad tube and fitting clad independent scaffold with 2.0 m maximum lift heights.

Design height

- Maximum height: 16 m to the top lift[1].

Maximum loading

- One lift loaded, plus one lift 50 % loaded, per façade with:

Load class	Duty	Maximum loading
3	General purpose	2.0kN/m²
4	Heavy duty	3.0kN/m²

- Inside boards loaded to 0.75 kN/m² at the working lift;
- Foundation design leg load (for the client): 16.0 kN (18.65 kN if a cantilever fan is included).

Ties

- 1 x light duty (3.5 kN) tie per 16 m²;
- Max 4.0 m between tie lines (ties required at alternate lifts);
- Max 4.0 m horizontal distance between vertical tie lines.

Location

Valid in the British Isles where the site wind exposure is not extreme as defined in TG20:13 chapter 03.

Add-on features

- This scaffold may optionally include a TG20 compliant bridge, pavement lift, cantilever fan, loading bay and ladder tower with a TG20 compliance sheet for each.

Criteria

To be erected as a TG20 compliant clad independent scaffold as described by TG20:13 chapter 06:

- 3 – 5 main boards and up to 2 inside boards wide;
- Maximum lift height: 2.0 m;
- Maximum bay length: 2.0 m (load class 3), 1.8 m (class 4);
- Maximum transom spacing: 1.2 m (load class 3), 0.9 m (load class 4);
- Unclad or with wire or plastic brick guards;
- Boarded at any number of lifts;
- Tied to an impermeable façade (no significant openings);
- Façade braced in every elevation, one set per sk bays;
- Ledger braced at alternate standards and at end frames;
- Double guard rails at boarded lifts (triple guard rail permitted at the top lift if required);
- Single guard rails at unboarded lifts;
- Internal edge protection provided where required;
- Tied in accordance with TG20:13 chapter 07.

Sign-off

Maximum working load: ☐ 2.0kN/m² ☐ 3.0kN/m²

Company: _____ Scaffold reference: _____

NASC membership no[2]: _____ Site reference: _____

Name: _____ Signature: _____

Position: _____ Date: _____

[1]TG20 compliance sheets for scaffolds of greater height and of other configurations are available from the TG20 eGuide.

[2]Use of this NASC document does not infer NASC membership. Go to www.nasc.org.uk to confirm membership.

Maximum height

Maximum loading

Tie duty and spacing

Permitted special features

Maximum dimensions

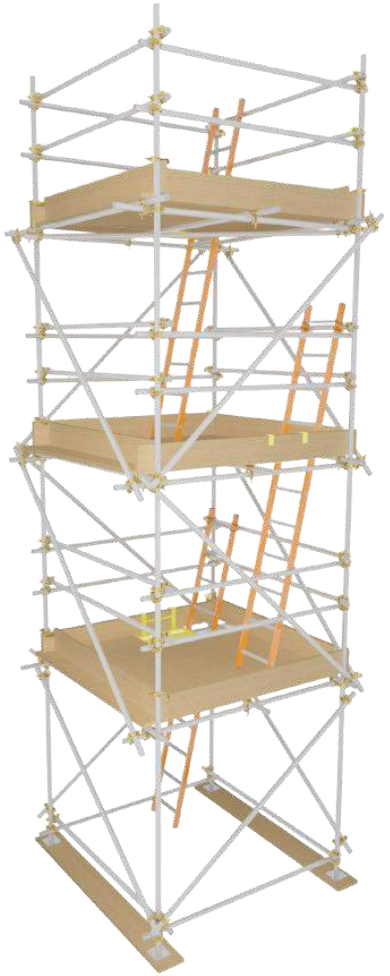
Required bracing

Details of the site and scaffold

Signature of the responsible individual

Principal Changes - Scope

- Expanded Scope of Compliant Scaffolds, including…
  - Tied Independent Scaffolding*
  - Towers
  - Interior Birdcage Scaffolding
  - Tied Putlog Scaffolds*
  - Fee-standing Independent Scaffolds
  - Loading Bays
  - Ladder access towers
  - Chimney Stack Scaffolds



*previously covered in TG20:08

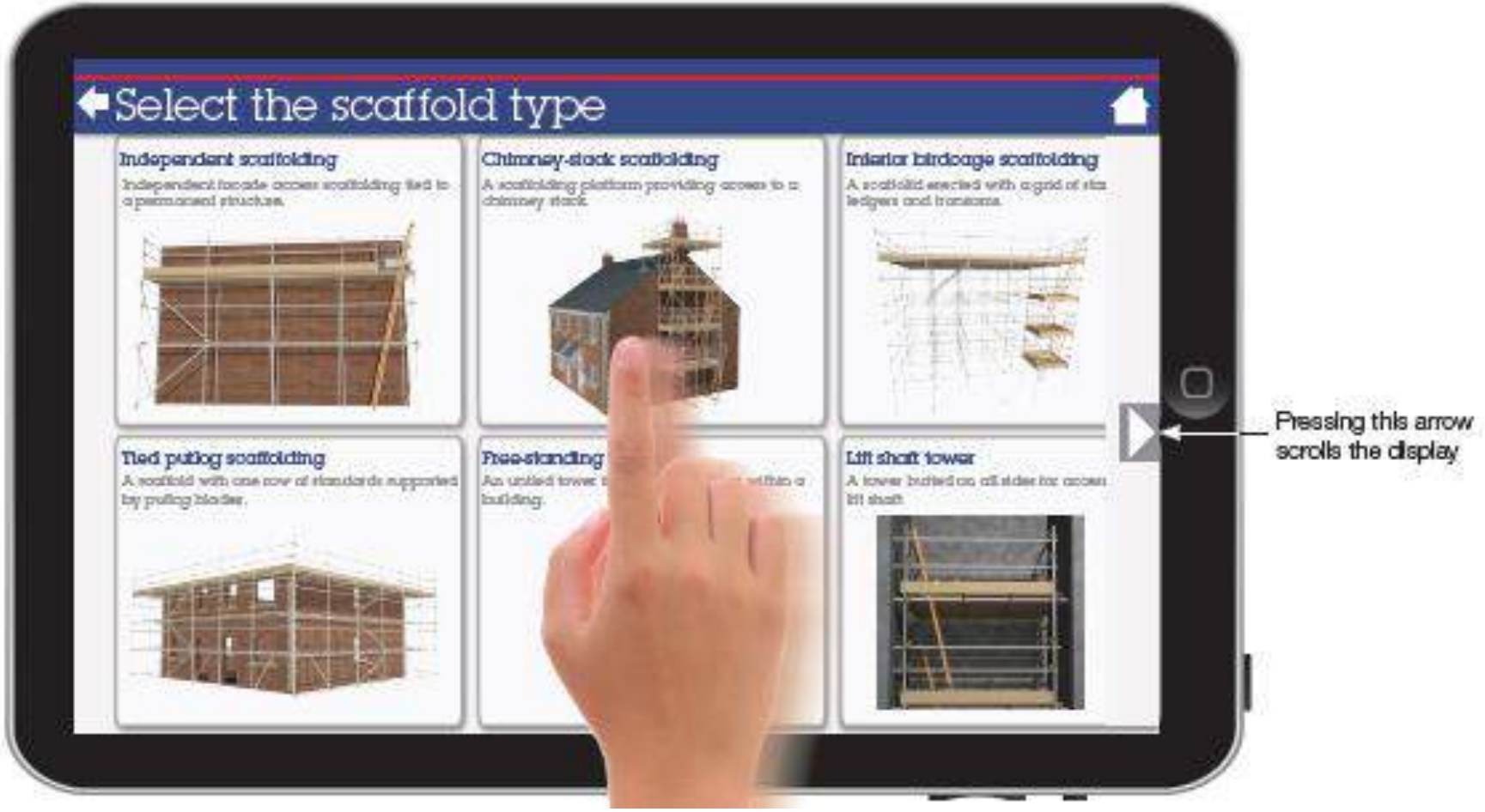
Principal Changes - Scope

- Expanded Scope of Scaffolding Features
- Would have previously required design
- Referred to now as **'Add-on'** features, including…

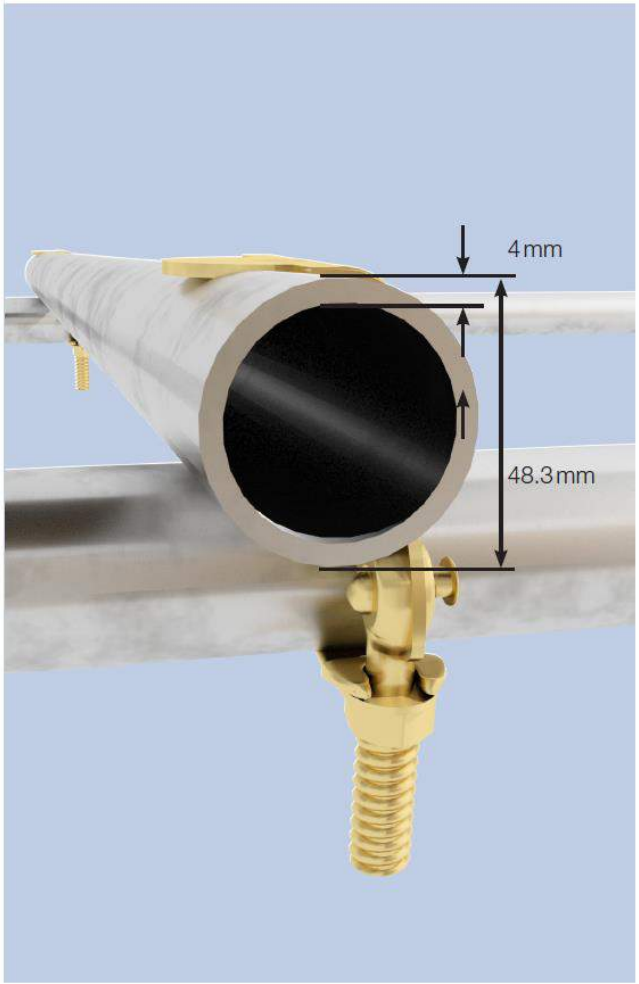
  - Bridging with beams
  - Prefabricated transom units
  - Light-duty protection fans
  - Pavement lifts*
  - Cantilevered access platforms
  - Inside board brackets

*previously covered in TG20:08

TG20 eGuide


Select the scaffold type
Independent scaffolding
Chimney-stack scaffolding
Interior birdcage scaffolding
Tied putlog scaffolding
Free-standing
Lift shaft tower
Pressing this arrow scrolls the display

Principal Changes - Tube



- TG20 Compliant Scaffolds only permits the following types of tube to be used:

✓ BS EN 39 type 4 (4mm) galvanised steel tubes or equivalent

✓ High-tensile galvanised steel tubes with a diameter of 48.3mm, thickness of 3.2mm, in accordance with BS EN 10210-1 (Hot rolled)

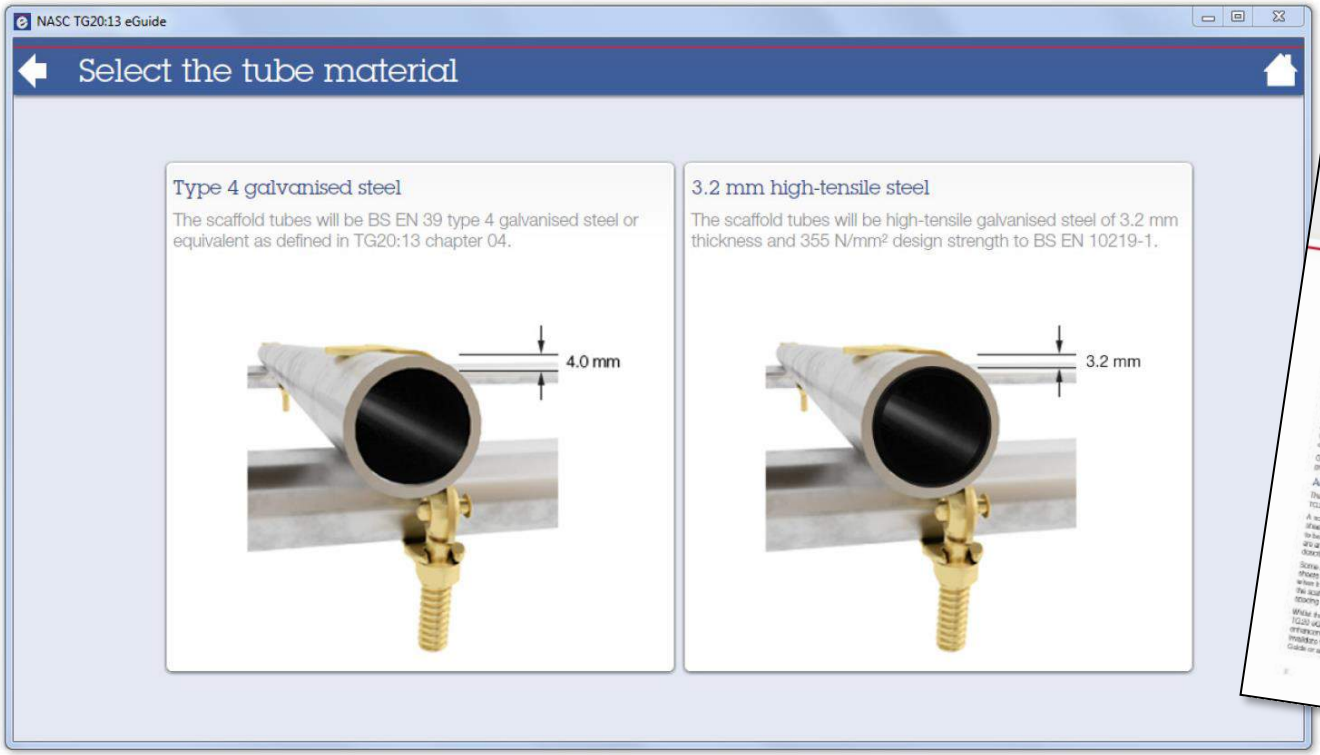
- The following types may not be used without design:

✗ BS EN 39 type 3 steel tubes

✗ Aluminium tubes

✗ Other dimension, material or grade

Principal Changes – Supplement 1.1



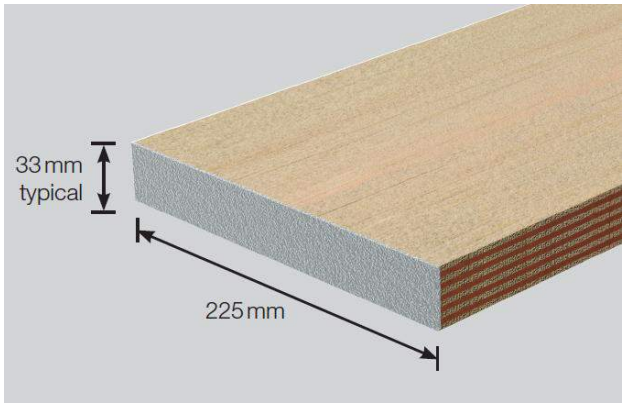
- ✓ High-tensile galvanised steel tubes with a diameter of 48.3mm, thickness of 3.2mm, in accordance with BS EN 10219-1 (Cold-formed)
- ✓ E-Guide updated to include BS EN 10219 tube
- ✓ Issued September 2014

Principal Changes - Scaffold Boards

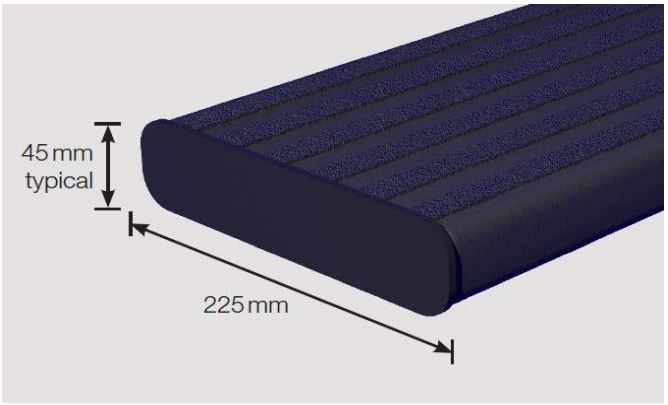
- Platforms constructed from timber boards or decks of other materials

- BS2482 Timber board (softwood)

- BS2482 Board (with nail plate option)



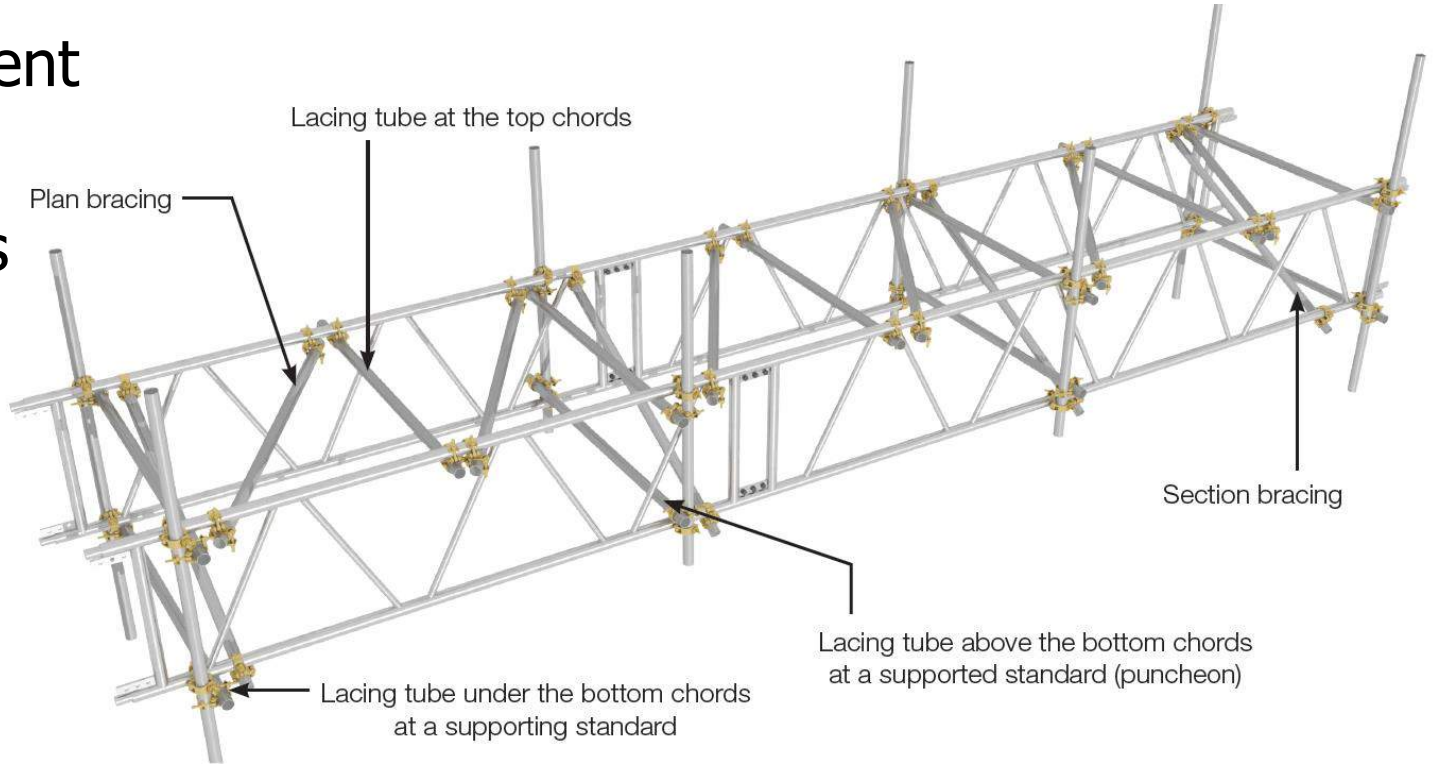
- LVL Board (Laminated Veneer Lumber)



- Composite Plastic Board

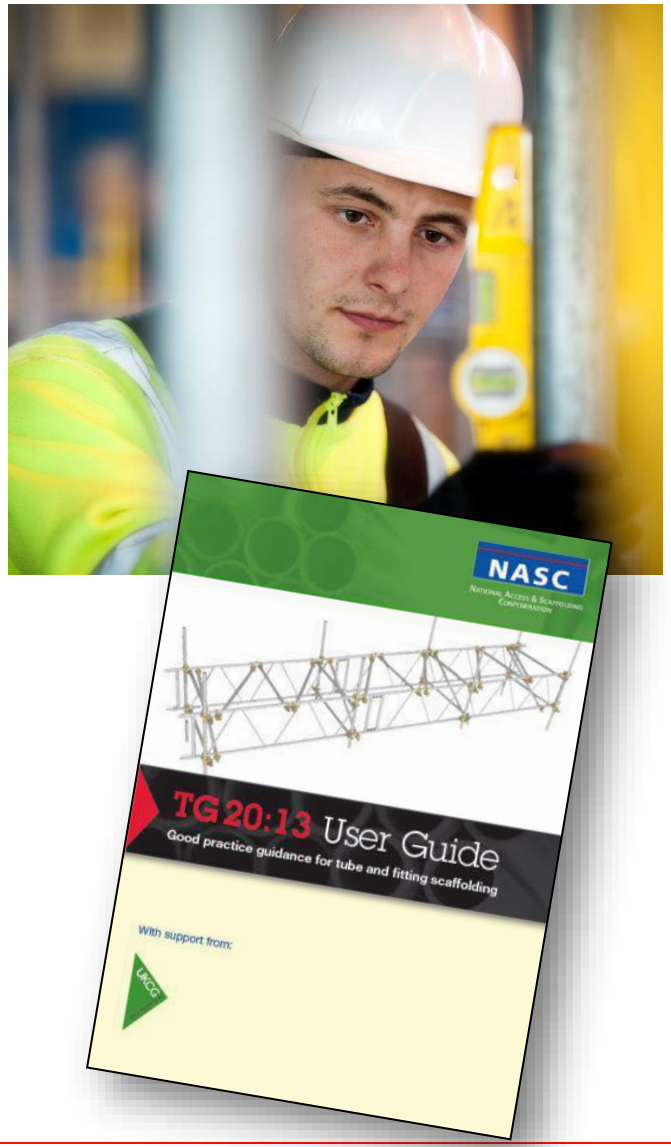
Learning Curve

- Challenges traditional and common practice
- Affects all involved in the scaffolding process:
  - Scaffolders
  - Inspectors
  - Management
  - Engineers
  - Estimators



Training & Awareness

- CISRS Training Courses – updated
- Basic Scaffold Inspection course extended (3 days)
- Awareness training available:
  - Practical implications
  - Planning and managing implications
- In house toolbox talks – User Guide



Enforcement & Compliance

- A '**bedding in**' period
- TG20:08 was officially withdrawn 30th June 2014
- Supported by Health and Safety Executive
- Enforcement to TG20:13 (WAHR'05)
- Supported by UKCG
- Client Specifications
- Conditions of Contract
- Questions being asked of system scaffold manufacturers and suppliers – compliance sheets???

www.simian-risk.com