

The NASC is recognised as the national trade association for access and scaffolding in the UK.

January 26th 2009

New Scaffolding Guidance TG20:08 Guide to Good Practice for Scaffolding with Tube and Fittings

The NASC (National Access and Scaffolding Confederation) has recently issued new guidance that will impact on all scaffold design in the UK. TG20:08 has been issued as technical industry guidance on the use of the European Standard BS EN12811-1 and applies to all tube and fitting scaffolding from the most basic to the most complex of scaffold structures.



TG20 is based on the previous UK scaffold standard BS 5973. This was however withdrawn by the BSI because it was neither consistent nor compatible with BS EN 12811-1. The support of the HSE was therefore fundamental in appropriately defining a safe method of working for the future. It was most

important that a document was prepared to give guidance to scaffolders and users alike, in the absence of BS 5973.

The principal differences between the European Standard BS EN 12811-1 and BS 5973 are:

- Six service Load Classes, some with partial area loads.
- Seven width classes and two headroom classes.
- Minimum unimpeded area along the full length of the working area.
- No differentiation between loading on main platform and inside boards.
- Loading according to "in-service" and "out-of-service" conditions.
- Reduction in the number of working platforms in use for light duty, general purpose and heavy-duty scaffolds. When in use a scaffold will have one

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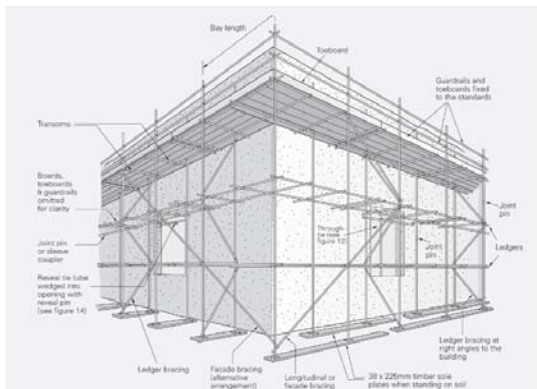
platform with 100% of the service load and one adjacent platform (above or below) with 50% of the service load.

- In the absence of wind, a scaffold shall have a notional horizontal load applied separately parallel and perpendicular to the bay.
- Wind loads on scaffolds shall conform to the national standard BS 6399.
- Reappraisal of effective lengths for the purpose of estimating the safe loads on standards.
- Structural design according to limit state theory.

It was paramount that the HSE and NASC address each of these differences to decide on a strategy which would provide best practice for the safe erection, operation and dismantling of each scaffold. It means that some of the requirements in BS EN 12811-1 were reconsidered in preference to good scaffolding practice. Fundamentally, the principles of BS 5973 remain unchanged and there are very few changes in the day to day work of a scaffolder. To ensure TG20 is easily accessible it is divided into two volumes:

Volume One: provides practical advice, information and conditions for scaffolds that can be built throughout the whole of the British Isles. While dealing with many

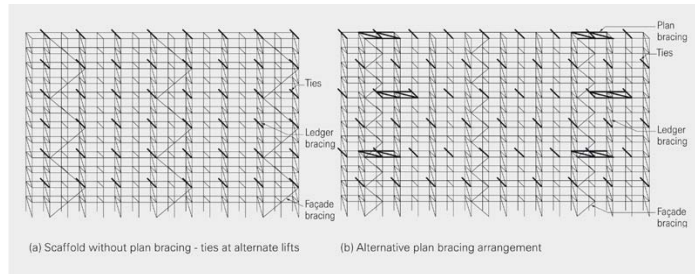
common applications, this volume defines a range of scaffolds, referred to as *Basic Scaffolds*, for which no further design, calculation or detailing is required. It has been prepared on a broad interpretation of the rules for design and construction, so that they can be applied to the very numerous variations of scaffolds, which inevitably



occur. It includes guidance on procedures for erection and dismantling, on the stability of scaffolds during various stages of these operations and on the responsibilities of users of scaffolding. Recommendations are also included for the inspection of scaffolds.

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Volume Two: provides technical information and advice required for the design of scaffold arrangements generally outside the range of Volume One.

There are many benefits with using TG20. Some of these include:

- A wider scope than BS 5973; including a larger number of scaffold arrangements, including data for up to two inside boards
- Covers the whole of the UK (BS 5973 valid only for England and Wales)
- Supported by full-scale tests and calculations while being informed by custom and practice
- More practical and workable
- Retention of ledger bracing every other bay
- Differentiation between debris netted and sheeted scaffolds
- Façade/sway bracing every six bays
- Maximum height for netted and sheeted scaffolds can be well above those in BS 5973
- A wider and more varied arrangement of tie patterns to achieve maximum height of scaffold
- Return to light duty loading on inside boards
- Provision of guidance on Putlog Scaffolds

A summary of the principal recommendations contained in TG20 for the safe erection of tube and fitting scaffolds as follows:

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- All scaffolds are to be designed except for *Basic Scaffolds* for which the Guide gives permissible heights under a range of conditions. Summary tables of safe heights are included
- The inside boards of scaffolds are assumed to be lightly loaded for access only (Class 1) in accordance with current best practice. Safe heights for scaffolds with full ledger bracing and with both fully and lightly loaded inside boards are given in Volume Two
- Lift heights are normally 2.0m with allowance for a pavement lift of 2.7m
- Independent tied scaffolds are recommended to have lines of ties at every lift or at alternate lifts. A scaffold achieves its maximum height with lines of ties at every lift. Ties should be evenly distributed over the scaffold and at least 50% of the ties should be to ledger braced frames. This applies to unclad, debris-netted and sheeted scaffolds
- Ledger braces to be fitted to alternate pairs of standards
- Façade bracing is recommended to be fitted full height to the outside standards every six bays and to extend over two bays between ledger braced standards
- Where scaffolds are greater than 8m high and the façade bracing covers a single bay only, plan bracing will need to be fitted
- Ties connecting the scaffold to the façade should be capable of transmitting lateral forces unless other provisions are made
- Details for pavement lifts have been provided including details for tying and bracing
- Details for putlog scaffolds have been provided

With the publication of TG20:08 all UK scaffolding contractors should now be working towards compliance of this guidance. Inevitably this process will take some time to establish itself in the industry.

The NASC envisages that all its members will be working fully to the new no later than the end of 2010.

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To support the launch of TG20, training modules are being developed for scaffolders. ASITO (Access and Scaffolding Industry Training Organisation) has agreed to produce toolbox talks and update all CISRS (Construction Industry Scaffolders Record Scheme) courses. The NASC is also reviewing training requirements for Supervisors, Managers, Estimators, Engineers and Safety Professionals.

TG20:08 is available direct from the NASC priced at £135 plus £6 post and packing.

For more information on scaffolding guidance and developments in best practice for the scaffolding industry plus a list of all regulated NASC members visit www.nasc.org.uk



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TG20 Working NASC Group Chairman