Zero incidents
Zero harm
Zero compromise
Keeping you healthy and safe, every day at work

ESSENTIAL STANDARD no.17

Scaffolding

Thames Water

KEY MESSAGES

- Check that scaffolding meets the standards in this guidance.
- Ensure that regular inspections are carried out on scaffolding by a suitably qualified person.
- All scaffolding companies on Thames Water sites must be registered and accredited with NASC full membership.
- Scaffolders must have a Construction Industry Scaffolders Registration Scheme (CISRS) Card.
- As per the NASC guidance SG4:15 (Preventing Falls in Scaffolding) scaffolders must always wear suitable fall arrest equipment (minimum harness and fall arrest lanyard) when erecting, altering or dismantling scaffolding.

1. Introduction

Scaffolding is used to provide access and working platforms for both construction and maintenance works. Most incidents are caused by falls, misuse, by objects falling from the scaffolding or by failure of the scaffold structure itself. Common problems with scaffolding include inadequate edge protection, poor foundations, removal of ties, inadequate bracing and guardrails, and overloading of platforms.

Therefore, scaffolds must be designed, erected, altered and dismantled by competent personnel as per NASC Guidance TG20:21 (Good Practice Guidance for Tube and Fitting Scaffolding) and manufacturer's guidelines for system scaffolds.

2. Scaffold design and temporary works

It is a requirement of the Work at Height Regulations 2005 that unless a scaffold is assembled to a generally recognised standard configuration then the scaffold should be designed with supporting calculations, by a competent person, to ensure it will have adequate strength, rigidity and stability while it is erected, used and dismantled.

At the start of the planning process, the client/principal designer/principal contractor/contractor should supply all the relevant information to the scaffold contractor to ensure that an accurate and proper design process is followed. Prior to installation, the scaffold contractor or scaffold designer can then provide relevant information about the scaffold.

For scaffolds that fall outside the scope of a generally recognised standard configuration (Built to a TG20 compliance sheet) the design must ensure that safe erection and dismantling techniques can be used throughout the duration of the works. To ensure stability for more complex scaffolds, drawings along with calculations should be produced and, where necessary be supplemented with specific instructions.

The Work at Height Regulations Schedule 3 Paragraph 7 states that all scaffolds should have strength and stability calculations.

This can be achieved through general recognized standard configurations (TG20 Compliance Sheets, Manufactures guidance sheets, bespoke scaffolding designs). Where scaffolds fall out of general recognized standard configurations then a bespoke design is required.

These need to be reviewed / erected / inspected in line with Thames Water Essential Standard 20 Management of Temporary Works.

3. Access

The NASC guidelines SG25:20 (Access and Egress from Scaffolds) require scaffolding to be erected to ensure safe access and egress.

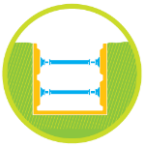
Take the following into account when ensuring safe access and egress:

- Height and width of scaffold

- Number of people using the scaffold at any one time

- Type of work to be undertaken on scaffold (for example confined spaces work and asbestos removal while using full face respirators require a higher degree of assessment for access and egress)

- Duration of scaffold hire



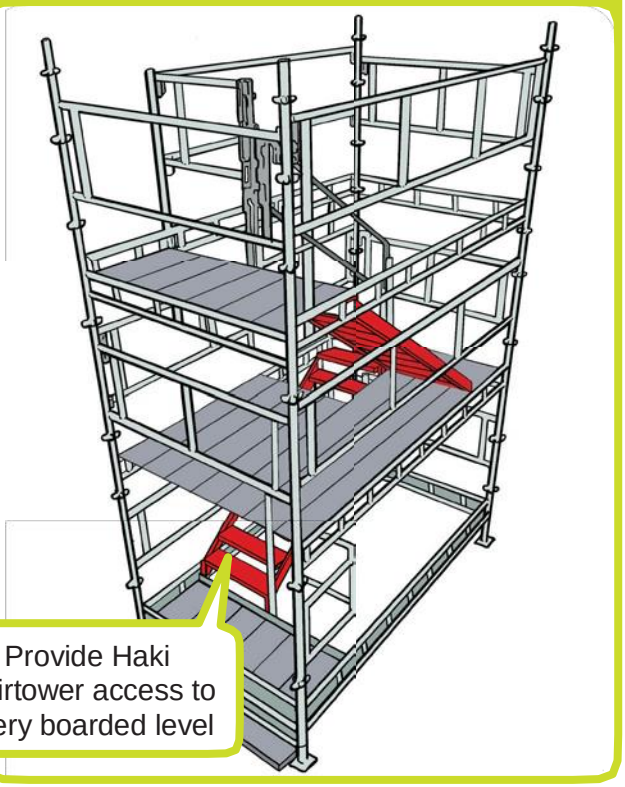
- The sub-structure or surface that the scaffold is to be placed upon

- Local emergency requirements. (fire, toxic gas alarms, etc.)

4. Hierarchy of Control for Access:

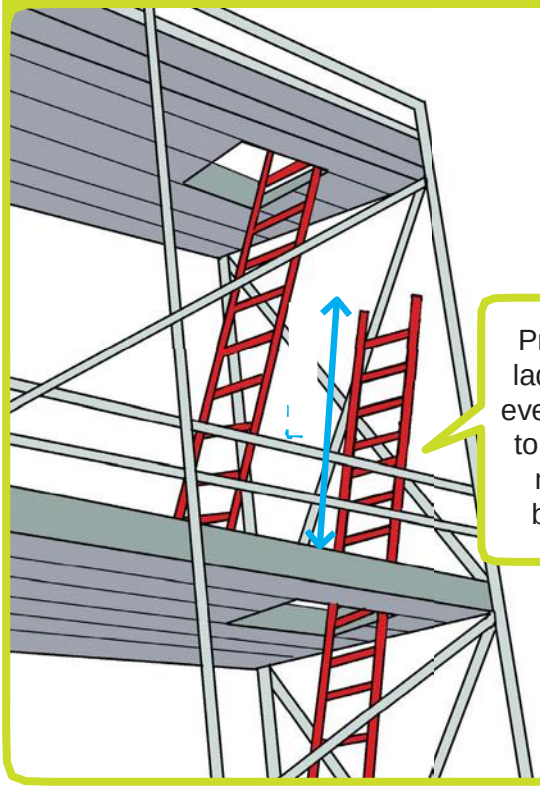
Select the best type of scaffold where possible. Refer to SG25:20 Access and Egress from Scaffolding, via Ladders and Stair Towers etc. You can select the most appropriate means of access by using this hierarchy of control list:

1. Stair access should always be considered as the first option:



Provide Haki stairtower access to every boarded level

2. If stair access is not possible, internal ladder access should be considered next:

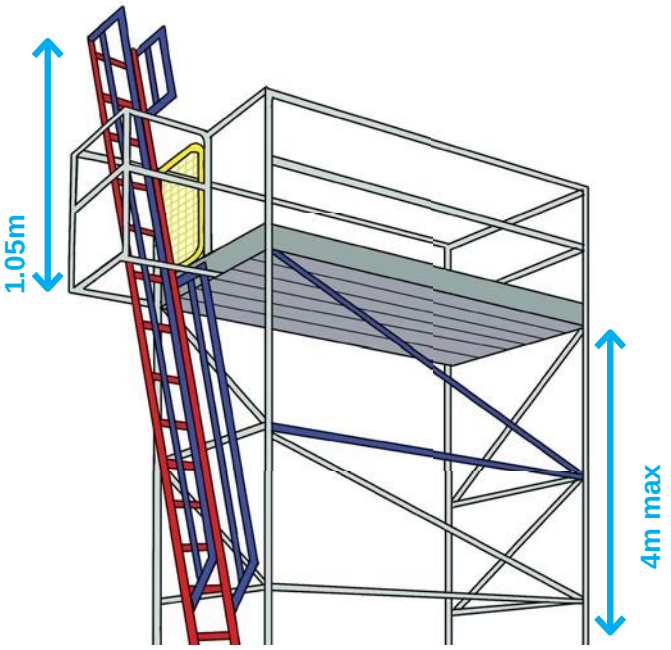


Provide internal ladder access to every level, ladder to extend 1.05m min. past the boarded level

3. If stair and internal ladder access are not possible, then an external ladder can be used if the following standards* are maintained:

- The platform height isn't more than 4 metres.
- The ladder access entrance at the top must be controlled with a self-closing gate located adjacent to the ladder.
- The ladder must project 1.05 metres above the platform.
- Extended guardrails must be installed around the top of the ladder at the stepping off point as close as is reasonably practicable to the ladder.
- Ladders over 2 metres in height must have side guard rails.

*Internal ladder handrail may not be possible to achieve



5. A Safe Scaffold

Although statutory inspections of scaffolds must always be carried out by a competent person, there are a few simple visual checks that you can look for on a typical independent tied scaffold, these include:

- The scaffold is erected on a firm, level foundation

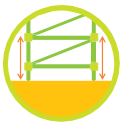
- Base plates are centrally placed on the sole boards

- Working platforms are fully boarded with boards properly supported.

- Double guardrails and toe boards are securely in place on working platforms.

- There are suitable means of access such as secured, undamaged ladders of the correct length and angle (75º). If the work is due to go on for some time, then consideration should be given to the use of staircases

- Sole boards are evenly supported



- Standards (uprights) are vertical and evenly spaced

- The scaffold is braced and tied onto a permanent structure or otherwise stabilised

- Access points to working platforms are protected by self-closing gates

- Housekeeping is well managed, for example working platforms are kept free from debris to maintain safe access

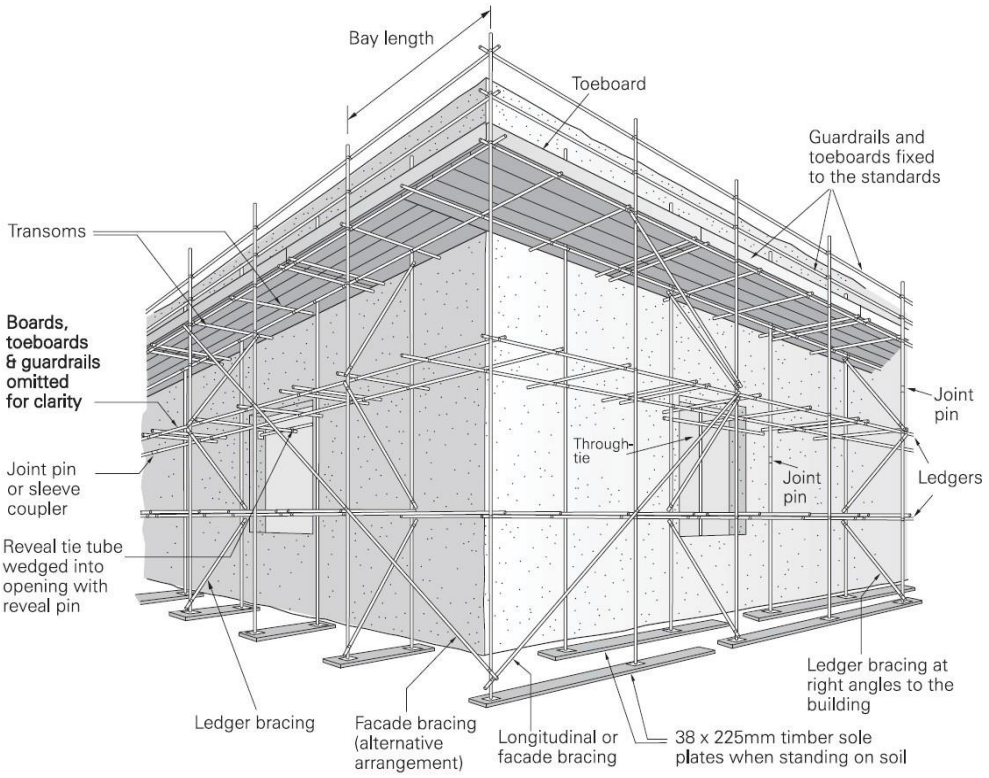
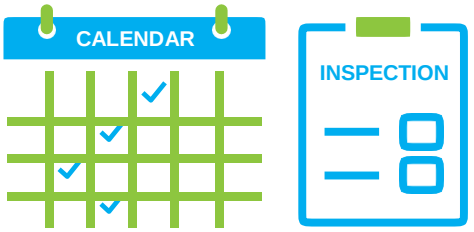


Figure: Independent Tied Scaffold (note: single guardrails omitted from non-working lifts for clarity)

6. Scaffold Inspection



Any scaffold must be inspected:

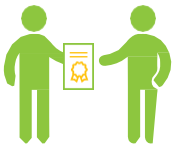
- Before it is first used in a position
- At least every 7 days or as specified by the designer
- Where any event may have affected the condition and stability

Record all inspections in accordance with The Work at Height Regulation 12 and Schedule 7.

Persons carrying out scaffold inspection must have a recognised inspection certificate relevant to the scaffold being inspected (Basic/Advanced/System). Acceptable courses include the basic scaffold inspection course, or the advanced courses offered by the CITB National Construction College or one of their approved training providers.

The person carrying out the inspection must complete a scaffold inspection report before the end of the working period in which he/she inspected the scaffold. Within 24 hours the report must then be provided to the person on whose behalf the inspection was done. Afterwards the report must be placed in a scaffold register and be retained on site.

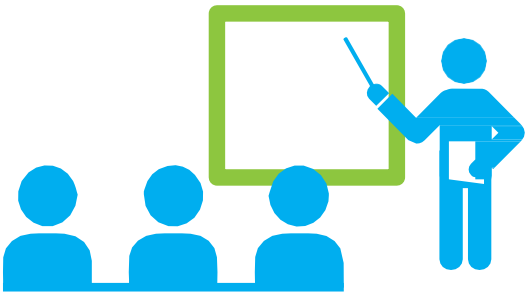
Use the Scafftag system to control access to the scaffold and to record dates of inspection. Once the scaffold is declared fit for use the scaffold report and the green scafftag or similar can be signed and inserted into its holder at each point of access to the scaffold.



Handover certificates and temporary works records must be issued that refer to relevant design drawings, working platform loadings, restrictions on use and number and type of anchors tested, etc.

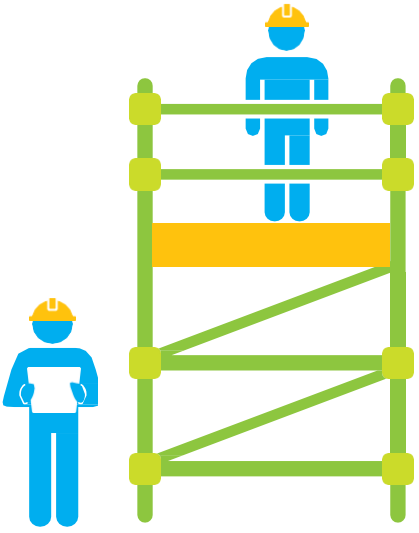
7. Competence

There are specific safety rules for safe erection, alteration and dismantling of scaffolds so this must only be done by competent people. All scaffolding companies on Thames Water sites must be registered and accredited with NASC full membership or alternatively a member of the Scaffolding Association at an audited membership level.
All scaffolders must hold a Construction Industry Scaffolders Record Scheme (CISRS) card. Scaffold labourers can only fetch and carry materials and must always work in a position of safety.



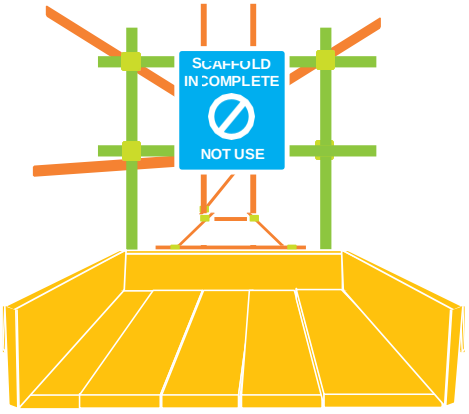
8. Supervision

There should be appropriate levels of competent supervision at the scaffolding, considering the complexity of the work, the number of personnel and the levels of training and competence of the scaffolders involved.



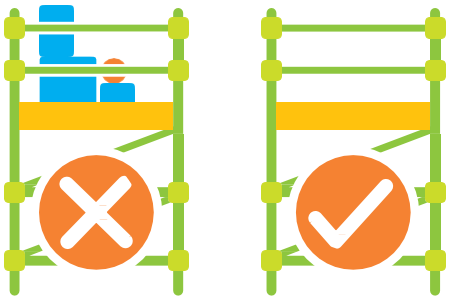
9. Incomplete Scaffolding

Always prevent access to incomplete scaffolding. Remove or adequately cover ladders to prevent unauthorised access when work is not in progress. Post warning signs such as 'Scaffold Incomplete' and install physical barriers, such as guardrails, to restrict access and use.



10. Housekeeping

Keep all scaffolds free of any surplus scaffolding components. Cap scaffold tubes used as guardrails or tubes that can be bumped into, as well as bolts on the scaffold couplers used to attach guardrails to staircases and walkways. Store materials tidily and safely. Don't leave materials unattended unless they're safely and suitably secured. Keep all access ways, staircases, ladders and doorways clear of spare materials.



11. Erection in hazardous areas and lightning protection

Any erection of any scaffolding within or proximal to a hazardous area as defined by the Dangerous Substances and Explosive Atmospheres Regulations protected with lightning protection must be competently assessed to ensure the earthing routes are not compromised.

Any erection of scaffolding on or around a structure protected with lighting protection must be designed such as to avoid compromise of that protection.

12. Management of scaffolding in adverse weather

Use of scaffolding in adverse weather must be considered in the safe system of work for activities to be performed using, erecting, maintaining or dismantling scaffolding.

Adverse weather includes:

- extremes of temperature,
- precipitation including rain, hail and snow
- high winds
- consequential flooding

Where damage is suspected scaffolding must be reinspected by a competent person prior to reuse.