

# Temporary Works – Scaffolding

Scaffolding presents a number of risk concerns, ranging from collapse due to incorrect design or erection, to fire damage due to the use of combustible wrap.

This Loss Prevention Standard provides practical guidance on managing the risk associated with scaffolding on construction sites

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# Temporary Works - Scaffolding

## Introduction

Scaffolding is present on construction sites for many of the project phases. When erected and managed carefully the risks of collapse are minimised, however incidents can occur, as seen in this collapse incident in London in April 2025 or this <u>fire event</u> in August 2024.

This document discusses the main hazards and provides guidance on managing the associated risks to reduce the potential for loss, damage and delays to building projects.



# **Understanding the Risks**

Scaffolding presents a number of risks, including but not limited to:

- Collapse. Poor assembly, overloading, damaged components, etc., can lead to failure.
- Weather. Strong winds can make scaffolding unstable, increasing the risk of collapse.
- Inspection and maintenance. Failure due to poor design, unnoticed damage or wear.
- Building façades. Scaffolding can damage cladding, windows, finishes, etc.
- Weatherproofing. Water can penetrate improperly sealed scaffold interfaces.
- Fire. Hot works, combustible wrap/nets, storage of flammable materials, etc.

# **Managing the Risks**

# Design

- Under the Work at Height Regulations 2005, scaffolds must either follow a
  recognised standard (e.g., NASC TG20 for tube-and-fitting or manufacturer guidance
  for system scaffolds) or be designed by a competent person using bespoke
  calculations. This ensures adequate strength, rigidity, and stability during erection,
  use, and dismantling.
- More advanced scaffolding will require an engineering design and check in accordance with BS 5975-1: Temporary works - Management procedures for the control of temporary works. Code of practice, categories 1, 2, or 3.

Refer to the Aviva Loss Prevention Standard **Temporary Works - Introduction** for further guidance.

- Design records should be retained on site for review.
- Designs must account for safe working loads, including but not limited to, cantilever decks, hoists, mast climbers, chutes, cranes, birdcages, and loading bays.
- Scaffold sheeting/wrap to be included in scaffold design to take into consideration wind loading and scaffold stability in high winds.



- Scaffold designs can incorporate structural stability from the building, but only under strict conditions:
  - ✓ For incomplete or untied structures (e.g., mass timber, timber frame), scaffolds must be self-supporting using kentledge, rakers, or buttresses until the building can provide support, in line with NASC guidance (TG20, SG28) that initial stability must not rely on an unfinished structure.
  - ✓ Where using an existing structure to tie into, the tie anchor layout should be designed and implemented taking into consideration the sequencing of construction and existing stability.

## **Timber Frame / Mass Timber - Additional controls**

Scaffold fire controls for timber and mass timber constructions require a risk-based approach focusing on preventing ignition, limiting fire spread, and ensuring safe escape routes during construction. Key measures include:

- Fire-retardant sheeting/wrap.
- Certified flame-retardant timber/metal scaffold boards.
- Designated escape routes (often the scaffold itself).
- Site-wide fire safety procedures.

#### **Erection**

- Safe Systems of Work (SSOW) and Risk and Method Statements (RAMS) must be site specific and produced for erection, adaptions, dismantling and intended use.
- Rescue plans must be formalised prior to commencing work.
- Verify the competency of the installer, inspector, and designer.
  - ✓ This should be completed by the client or the appointed main contractor.
- Carry out a Ground Stability review to ensure the ground can safely support the scaffold's weight and prevent sinking, tilting, or collapse.
- · Check:
  - ✓ For overhead cables (live electrical and earthing).
  - ✓ Anchorage systems, tie-ins, raker support and/or weighted down (kentledge).

Note: Guidance can be found in NASC TG21: Commissioning Scaffold Designs.

#### Fire

- Sheeting/wrap must conform to LPS 1215: Requirements for the LPCB Approval and Listing for Fire Performance of Containment Net and Sheet Materials for External Use on Construction Sites.
- Brick guards, fans and hoists should be non-combustible.
- In accordance with NASC TG10:21, scaffold boards and battens should be treated and certified in accordance with BS EN 13501-1: Fire classification of construction products and building elements Classification using data from reaction to fire tests and achieve a fire classification of B with additional classifications of S1 smoke rating and D0 flaming droplet production.
  - ✓ Where an appreciable risk exits, additional control measures should be specified within the tender documents. For scaffolding contractors this may include the provision of flame-retardant timber boards or battens (**TG10:21**) or metal boards.
- No combustible materials to be stored on or beneath the scaffolding.
- Prohibit the storage of flammable liquids and gases on or beneath scaffolding.
- Prohibit Hot Works. Where this is not possible, hot works should be conducted in strict accordance with the Aviva Loss Prevention standard **Hot Work Operations**.
- Waste chutes must be of non-combustible/metal construction only.



 Waste skips should be protected and located at least 10 metres from project works and stores.

Refer to the Aviva Loss Prevention Standard Scaffolding and Fire for further guidance.

**Note:** The flame-retardant properties of scaffold boards, when continually subjected to rain or offshore conditions, may deteriorate over time. Since the degree of exposure will determine how long acceptable flame-retardant properties will remain, the treatment processor should be contacted for guidance.

# **Scaffold Inspections**

- A scaffold must be inspected by a competent person after it is first erected and before use, at least every seven days while in service, and after any event that could affect its stability, such as severe weather, impact, or unauthorised alterations.
- Handover certification & inspection records should be retained on site.
- Pre-start and close-down self-inspections of the scaffolding should be completed by responsible persons. Checks to include ensuring storage and housekeeping rules are being followed.
- Anchor ties must be installed as per design; and pull tests (number as specified in the design) conducted with test records to be retained on site.
- No unauthorised alterations.
  - ✓ Alterations should only be made by an approved, certified scaffolder. If any unauthorised alteration is noted, access to the scaffold must be prohibited and full physical inspection completed by a competent person.
- Scaffold inspection tags should be used; and where used, must show the latest inspection date and status, confirming it is safe for use.

## Security

- Prevent access to scaffolding by unauthorised persons.
- Hoardings should be installed around individual scaffolded structures where not within a secured perimeter.
- Remove scaffolding ladders or install secured ladder guards outside operational hours.
- Video Surveillance Systems (VSS) should be provided and monitored via an accredited Remote Video Response Centre (RVRC).
  - ✓ Where not present, the use of temporary, detector-activated Video Surveillance Systems should be considered. Monitoring of such systems should be provided by the supplier.
- Response arrangements should be in place for any VSS-related security concerns.
  The use of audio challenge, which allows the RVRC to issue warnings to any
  unauthorised persons attempting to access the site or behaving suspiciously, should
  be considered.
- Where warranted by the risk exposure, security guarding should be provided.
- Traffic management and barriers should be implemented to mitigate risk of impact damage.

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For more information please visit: Aviva Risk Management Solutions - Specialist Partners



## Sources and Useful Links

- NASC Guidance Index NASC-Guidance-Index-03-May-25.pdf
- HSE Construction Work at Height Construction Work at height HSE
- HSE Scaffolds HSE
- HSE Scaffolding FAQ Scaffolding HSE
- HSE Temporary Works <u>Temporary Works HSE</u>
- HSG168 Fire safety in construction Fire safety in construction HSE
- Temporary Works Forum Scaffolding Temporary Works Forum
- Structural Timber Association (STA)'s 16-Step Process 16stepstofiresafety-3.pdf
- LPS 1215: Requirements for the LPCB Approval and Listing for Fire Performance of Containment Net and Sheet Materials for External Use on Construction Sites

**Note:** Whilst UK standards and legislation are referenced in this document, other international standards and legislation should be referenced where applicable.

## **Additional Information**

Relevant Aviva Loss Prevention Standards include:

- Scaffolding and Fire
- Hot Work Operations
- Temporary Works Introduction
- Mass Timber Planning and Design (RIBA 0-4)
- Mass Timber Construction (RIBA 4-6)

To find out more, please visit <u>Aviva Risk Management Solutions</u> or speak to one of our advisors.

## Email us at riskadvice@aviva.com or call 0345 366 6666.\*

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