

Temporary Works Guidance Notes

Wind Loading · Excavation Support · Crane Mats & Outrigger Pads · Scaffolding Foundations

TWT-GN-01 to 04

Rev A

Issued July 2026

Aligned to BS 5975:2024

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Wind Loading on Temporary Works

Deriving wind actions to BS EN 1991-1-4 and applying them to hoardings, scaffolds, falsework and site structures — including working wind limits and storm-readiness controls.

1. Purpose and scope

This note explains how wind loading should be considered in the design and site control of common temporary works: hoardings and fences, scaffolds (sheeted and unsheeted), falsework and propping, site accommodation, and temporary structures. It is written for temporary works coordinators (TWCs), site engineers and designers working under a BS 5975:2024 temporary works procedure in the UK.

It does **not** replace a wind assessment to BS EN 1991-1-4 and its UK National Annex, and it does not cover permanent-works wind design, marquees to BS EN 13782, or crane selection (which remains the appointed person's responsibility under BS 7121).

2. Why wind matters for temporary works

Wind is the most common environmental action that fails temporary works. Hoardings blow over onto footpaths, sheeted scaffolds pull their ties, unrestrained falsework racks over, and stacked materials become missiles. Three features make temporary works especially wind-sensitive:

- **Light weight, large sail area.** Many temporary structures rely on self-weight or ballast for stability, and adding sheeting, netting, banners or signage can multiply the wind load on a structure that was never designed for it.
- **Incomplete states.** A part-erected structure often has less strength and stability than the completed scheme — the critical wind case is frequently during erection, alteration or dismantle.
- **Changing site conditions.** Local shielding and funnelling change as the permanent works rise; a scaffold that was sheltered in month one can be exposed in month six.

COMMON FAILURE TRIGGER

Adding sheeting, monarflex, debris netting or advertising banners to an existing scaffold or fence *without a design check*. This changes the structure's wind loading fundamentally and must be treated as a design change under the temporary works procedure — not a site-level decision.

3. Key standards and references

Document	Relevance
BS EN 1991-1-4 + UK National Annex	The core method for deriving site wind speeds and peak velocity pressure, and pressure/force coefficients for structures.
BS 5975:2024	Procedural control of temporary works; stability requirements including minimum notional horizontal loads; guidance on wind during working conditions.
TG20:21 (NASC)	Wind loading built into compliance sheets for tube-and-fitting scaffolds, including sheeting and netting factors and town/country terrain.
PD 6688-1-4	UK background and supplementary guidance to BS EN 1991-1-4.
BS EN 12811-1 / BS EN 12812	Performance requirements for scaffolds and falsework, including in-service wind assumptions.
BS EN 13374	Temporary edge protection systems.

4. Deriving the design wind action

The BS EN 1991-1-4 route, in outline:

1. **Fundamental basic wind velocity** — read the mapped value for the site from the UK National Annex wind map, then correct for **altitude**.
2. **Directional and seasonal factors** — for temporary works with a defined, limited duration, the National Annex permits seasonal and probability factors that can legitimately reduce the design wind speed for

short exposure periods. Use them only with a defined erection window and a plan for what happens if the programme slips past it.

3. **Terrain and orography** — classify the site exposure (sea, country, town), account for distance inside town terrain, and check for orographic speed-up on hills, cliffs and escarpments.
4. **Peak velocity pressure $q_p(z)$** — computed at the reference height of the structure; this is the pressure the coefficients are applied to.
5. **Force/pressure coefficients** — select for the structure form: free-standing walls and hoardings, signboards, lattice structures and scaffolds, or clad structures. Net coefficients for free-standing hoardings vary strongly with solidity, length and the presence of return corners — end zones see markedly higher suction/pressure than mid-length zones.

WORKING WIND VS. MAXIMUM WIND

BS 5975 distinguishes the **working state** (operations continue up to a stated working wind pressure, with a defined site response above it) from the **maximum (out-of-service) state** the structure must survive with work stopped. Both cases must be designed for, and the working wind limit must be stated on the design output so site can enforce it — typically via anemometer readings and forecast triggers.

In addition to wind, BS 5975 requires falsework and similar temporary structures to resist a **minimum notional horizontal disturbing force** — conventionally taken as not less than 2.5% of the applied vertical loads, applied where the loads act — to cover erection tolerances, eccentricities and incidental impacts. Wind is checked in combination; the governing case is whichever is worse.

5. Application to common temporary works

5.1 Hoardings and fencing

- Treat as free-standing walls; net pressure coefficients depend on solidity and end effects. A hoarding return or free end attracts significantly higher load than the run.
- Stability is usually the governing check: overturning and sliding of posts, ballast blocks or ground anchorage. Kentledge on smooth ground can slide before it overturns — check both.
- Ground fixity (post embedment, concrete foundations) must reflect real ground, not assumed ground.

5.2 Scaffolds

- TG20:21 compliance sheets embed wind assessment for standard configurations — but only within the stated limits (height, cladding, town/country terrain, tie pattern). Outside those limits a bespoke design is required.
- Sheeting and debris netting factors are step changes: netting can roughly double, and impermeable sheeting can several-fold increase, the wind load compared with an unclad scaffold.
- Ties resist wind both in pressure and suction — tie capacity, spacing and testing are wind-critical items. Missing or removed ties are a leading cause of scaffold collapse in storms.

5.3 Falsework and propping

- Check the erection sequence: bare towers before beams/soffit are landed, and the just-struck condition, can be the critical wind cases.
- Wind on the permanent works being supported (e.g. a wall or beam on props) loads the temporary works — include the sail area of the supported element, its formwork and any weather protection.

5.4 Site accommodation, materials and small structures

- Stacked cabins, container offices and welfare units need anchorage or ballast checks, particularly when raised on jack-legs or stacked two-high.
- Loose materials, boards and sheet piles on scaffolds or roof edges must be restrained or removed ahead of forecast winds — make this an explicit item in the storm-readiness plan.

6. Illustrative example — hoarding stability (concept)

A 2.4 m timber hoarding in town terrain is assessed for a peak velocity pressure of, say, $q_p = 0.60 \text{ kN/m}^2$ with a net pressure coefficient of 1.2 in the run of the wall:

$$w = c_{p,\text{net}} \times q_p = 1.2 \times 0.60 = 0.72 \text{ kN/m}^2 \rightarrow 1.73 \text{ kN per metre run, acting at mid-height (1.2 m)}$$

$$\text{Overturning moment} = 1.73 \times 1.2 \approx 2.1 \text{ kNm per metre run of hoarding}$$

The restoring moment from posts, foundations or kentledge must exceed this with an adequate margin, and end zones must be checked for their higher coefficients. *The numbers above are illustrative only — site-specific wind derivation is always required.*

7. Site control checklist

- ☐ Design output states the design wind speed/pressure, the working wind limit, and any duration or seasonal limits on validity.
- ☐ Any change to cladding, sheeting, netting, signage or banners is referred back to the designer before it happens.
- ☐ Ties, guys, ballast and anchorages are installed as designed and included in scaffold/TW inspections.
- ☐ A named person monitors weather forecasts; trigger levels and pre-storm actions (stop work, clear loose materials, close sheeting gates) are written down.
- ☐ Anemometer available where operations have wind limits (lifting, sheeting works, tower cranes).
- ☐ Post-storm inspection is carried out and recorded before work restarts on or near the structure.
- ☐ Programme slippage beyond the assumed exposure window is flagged to the TWC and designer.

8. References

- BS EN 1991-1-4:2005+A1:2010 and UK National Annex — Wind actions.
- PD 6688-1-4 — Background information to the UK National Annex.
- BS 5975:2024 — Code of practice for temporary works procedures and the permissible stress design of falsework.
- NASC TG20:21 — Guide to good practice for tube and fitting scaffolding.
- BS EN 12811-1, BS EN 12812, BS EN 13374.

Excavation Support

Selecting, designing and controlling excavation support to BS 6031 and BS 5975 — support options, design inputs, permits, inspections and the ground rules that keep people out of collapses.

1. Purpose and scope

This note sets out the essentials of selecting, designing and controlling excavation support for construction excavations — trenches, pits, basements and service excavations — under a BS 5975:2024 temporary works procedure. It is aimed at TWCs, site engineers and designers.

It does not cover tunnelling, cofferdams in open water, or the detailed geotechnical design of embedded retaining walls (see CIRIA C760); those require specialist design input.

2. The ground rules

NO SAFE UNSUPPORTED DEPTH

There is **no depth below which an unsupported excavation is automatically safe**. The old “1.2 m rule” has no standing: people have been killed in excavations shallower than that. Every excavation that a person will enter needs a decision — based on ground, water, surcharge and time — to batter it, bench it, support it, or positively exclude entry.

- Excavation collapse is rarely survivable: a cubic metre of soil weighs around two tonnes, and burial to chest height alone can prevent breathing.
- Ground that stands vertically when first cut can collapse without warning minutes, hours or days later as pore pressures adjust, tension cracks open, or it dries/wets.
- CDM 2015 requires excavations to be prevented from collapsing, supported or battered as necessary, and inspected by a competent person before each shift and after any event likely to have affected their stability.

3. Key standards and references

Document	Relevance
BS 6031:2009	Code of practice for earthworks — the primary UK reference for excavation and trench support.
BS 5975:2024	Procedural control: design brief, design check category, permits, inspection and loading/unloading of support systems.
CDM 2015 (Regs 22 & Sch. of inspections)	Legal duties for supporting excavations and inspection/reporting requirements.
CIRIA C760	Guidance on embedded retaining wall design (sheet piles, king posts, secant/contiguous walls).
HSG47	Avoiding danger from underground services — permit-to-dig practice.
BS EN 13331 / manufacturer data	Proprietary trench lining systems — certified capacities and use limits.

4. Support options and selection

Option	Typical use	Watch-outs
Battering / benching	Open sites with space; any depth if slope is designed for the soil and water conditions	Needs geotechnical input for slope angle; surcharge and water rapidly degrade stability; weather sensitivity
Trench box / drag box	Service trenches in reasonable ground; progressive excavation	Boxes <i>protect</i> rather than tightly support — ground can still move outside; certified depth/pressure ratings must not be exceeded; ends often open
Vertical sheets + hydraulic walers/frames	Pits and shafts, poorer ground, closer support of faces	Sequence matters: support installed with excavation, not after; frame levels from the design, not convenience
Steel sheet piling (with frames/anchors)	Deeper excavations, water-bearing ground, adjacent structures	Embedded wall design to CIRIA C760; driving vibration and clearance; extraction effects
King post (soldier pile) walls	Mixed ground above water table, phased basements	Lagging installation exposes ground temporarily; base stability and toe fixity are design-critical

5. Design inputs the designer must have

- **Ground information** — GI report, trial pits or at minimum a competent description of the strata and any made ground. State what was assumed if information is limited, and require verification on excavation.
- **Groundwater** — standing level, seasonal variation, and any perched water. Water pressure frequently exceeds earth pressure as the dominant load on support systems, and inflow can destroy trench stability.
- **Surcharge** — plant, spoil, materials, traffic and adjacent foundations. A nominal allowance (commonly a minimum of 10 kN/m² for incidental surcharge) covers routine loads only; cranes, piling rigs and loaded wagons need their real loads and positions assessed.

- **Adjacent assets** — structures and their foundation depths, highways, railways, and buried services (HSG47 applies: locate, mark, permit, safe-dig).
- **Duration and season** — how long faces stay open, and winter water conditions.

ZONE OF INFLUENCE

As a first filter, treat any load or foundation inside a line drawn at roughly 45° up from the base of the excavation as capable of loading the support system — and any excavation inside that line from an existing foundation as capable of undermining it. This is a screening rule for when to involve the designer, not a design method.

6. Site controls

- **Permit to dig** before breaking ground; service drawings, CAT & genny survey, trial holes, and marked exclusion corridors.
- **Permit to enter** the excavation, tied to the support design's stated limits (depth, open length, time faces may stand unsupported, dewatering in operation).
- **Access/egress** — ladders or ramps at the required intervals so nobody climbs the support or the face.
- **Edge protection and spoil** — barriers to stop people and plant; spoil and materials set back from the edge (keep the design's stated clear distance — commonly at least 1 m, more for deep or weak-ground excavations); stop blocks for vehicles tipping or reversing.
- **Inspections** — competent-person inspection before each shift, after rain, frost, thaw, dewatering changes, adjacent works, or any partial fall; recorded, with defects actioned before entry.
- **Installation and removal sequence** — support goes in as digging proceeds and comes out as backfilling proceeds, per the design method statement. Removing frames early to ease pipe-laying is a classic fatal shortcut.

7. Illustrative example — checking a trench box (concept)

A drainage trench 3.5 m deep in firm clay with the water table below formation, plant kept outside the zone of influence, and a 10 kN/m² incidental surcharge. A proprietary box is proposed:

- Confirm the box's **certified depth and panel pressure rating** against the design earth + surcharge pressure diagram for the actual soil — not just “it's rated to 4 m”.

- Confirm strut/spindle capacity against the pressure on the panel area, end-panel or end-sheet requirements, and the lift/installation method (dig-and-push vs. place-in-pre-dug).
- Confirm clear internal working width with the pipe and bedding in place, and ladder access position.

If any input changes on site — deeper, wetter, softer, plant closer — the check is void and goes back to the designer.

8. Site control checklist

- ☐ Design brief issued; support design and check completed to the correct category before excavation starts.
- ☐ Permit to dig in place; services located, marked and, where needed, exposed by hand.
- ☐ Support system on site matches the design (type, rating, condition) — damaged or mixed-system kit rejected.
- ☐ Installation sequence and maximum unsupported face/time stated and followed.
- ☐ Dewatering (if any) running, monitored, and with a failure response plan.
- ☐ Access ladders, edge protection, spoil set-back and vehicle stop blocks in place.
- ☐ Pre-shift and post-event inspections recorded; entry controlled by permit.
- ☐ Backfill and support-extraction sequence follows the design; voids behind sheets grouted/filled where required.

9. References

- BS 6031:2009 — Code of practice for earthworks.
- BS 5975:2024 — Temporary works procedures.
- Construction (Design and Management) Regulations 2015.
- CIRIA C760 — Guidance on embedded retaining wall design.
- HSE HSG47 — Avoiding danger from underground services.

Crane Mats & Outrigger Pads

Outrigger reactions, ground bearing, pad and mat sizing, proximity hazards and on-site verification — engineering the standing beneath the lift plan.

1. Purpose and scope

This note covers the temporary-works side of crane standing: outrigger pads and mats for mobile cranes, crane mats for crawler cranes, and the ground checks behind them. It is aimed at TWCs, site engineers, appointed persons and designers working under BS 5975:2024 and BS 7121.

The lift plan, crane selection and rigging remain the appointed person's responsibility under BS 7121; this note deals with what the crane stands on. Piling and heavy-plant *working platforms* are related but distinct — see BRE 470 and the Toolbox piling-mat resources.

2. Why crane standing fails

- **The load is bigger than intuition suggests.** A single outrigger can carry most of the crane's gross load during a slew — maximum outrigger reaction, not average, governs.
- **The ground is worse than assumed.** Made ground, backfilled trenches, buried tanks, cellars and soft spots concentrate under one outrigger; the crane only needs one corner to fail.
- **The spread is overestimated.** A pad only spreads load over its full area if it is stiff enough; a thin plate on soft ground bends and loads the middle. The common “45° through the mat” assumption has limits and does not apply to flexible mats.
- **Conditions change.** Rain, dewatering, adjacent excavation and repeated set-ups degrade a standing that was checked once on day one.

3. Key standards and references

Document	Relevance
BS 5975:2024	Procedural control of the mat/pad design as temporary works; design checking.
BS 7121 series	Safe use of cranes — lift planning, appointed person duties, siting.
CPA / Strategic Forum guidance (e.g. “Ground Conditions for Construction Plant”)	Practical industry guidance on plant standing and ground assessment.
BRE 470	Working platforms for tracked plant — design method where a platform (not just pads) is required.
BS EN 1997-1 (Eurocode 7)	Geotechnical basis for bearing resistance where a calculated approach is used.

4. Loads: what to design for

- Obtain **maximum outrigger reactions** from the crane manufacturer's data or lift-planning software for the actual crane, configuration, boom length, counterweight and worst load/slew position — not a generic percentage of gross weight.
- For crawler cranes obtain **track bearing pressure diagrams** (they are far from uniform — travelling, slewing and lifting each give different distributions, with pressure peaks under one track end).
- Include out-of-service and erection/dismantle cases for the crane itself, and wind where it affects reactions.
- State the reactions on the design output; if the crane, configuration or lift changes, the standing design is re-checked.

5. Ground: what it can take

Allowable bearing pressure must come from ground information — GI reports, plate tests, or at minimum a competent assessment with stated assumptions and site verification. Indicative ranges often quoted for

initial sizing (to be confirmed, never relied on blind):

Ground (near surface)	Indicative allowable bearing	Caution
Soft clay / silt	< 75 kN/m ²	Often far lower when wet; settlement governs
Firm clay	75–150 kN/m ²	Softens with standing water and remoulding
Stiff clay	150–300 kN/m ²	Check for desiccated crust over softer material
Loose granular	< 100 kN/m ²	Vibration densifies/settles; water washes out fines
Compact granular	200–600 kN/m ²	Verify compaction is real, not assumed
Made ground / backfill	Assume poor until proven	Highly variable; the classic outrigger-punch-through case

MADE GROUND AND HIDDEN FEATURES

Ask specifically: backfilled service trenches, manholes and chambers, basements and cellars, soakaways, old foundations, recently placed fill. A desk study plus a walkover with the drainage drawings catches most punch-through failures before they happen.

6. Sizing pads and mats

1. **Required bearing area:** $A \geq \text{maximum reaction} \div \text{allowable bearing pressure}$.
2. **Check the pad is stiff enough** to work that area: timber mats spread load only over a width consistent with their bending/shear capacity and stiffness; steel pads and engineered mats have manufacturer's rated spread/capacity data — use it.
3. **Check pad bending and shear** for the reaction applied over the outrigger foot area (not spread over the whole pad).
4. **Check settlement/levelness** — cranes are sensitive to differential settlement across outriggers; bedding must be firm, level and fully in contact (no rocking on high spots).
5. **Crawler mats:** design for the peak track pressure over the mat span, mats tight-butted and bedded, and check the travel path, not just the lift position.

7. Proximity hazards

- **Excavations and slopes:** as a screening rule keep outriggers outside a 1(H):1(V) line from the excavation base (further in weak ground); anything closer needs a designed assessment of the slope/support with the outrigger surcharge applied.
- **Buried services and structures:** check crushing/overload of shallow services, culverts and basement roofs under outrigger loads.
- **Recently backfilled ground** next to new foundations or service runs — often the softest spot on the site and exactly where the crane wants to sit.

8. Illustrative example — outrigger pad sizing (concept)

Maximum outrigger reaction 250 kN; ground assessed as firm clay with allowable bearing 100 kN/m²:

Required area = $250 / 100 = 2.5 \text{ m}^2 \rightarrow$ e.g. a $1.6 \text{ m} \times 1.6 \text{ m}$ pad (2.56 m^2)

The pad must then be verified as stiff and strong enough to distribute a 250 kN point-ish load over that full area (this is often what governs — a stack of unconnected sleepers will not achieve it), bedded level on prepared ground, with the outrigger foot central. *Illustrative only; use project reactions and verified ground values.*

9. Site control checklist

- ☐ Maximum outrigger reactions / track pressures obtained for the actual crane and configuration.
- ☐ Ground assessed from GI/desk study/walkover; hidden features (trenches, cellars, services) checked on drawings.
- ☐ Pad/mat design (size, type, material, bedding) issued and checked under the TW procedure.
- ☐ Standing area proof-checked where required (plate test or stated verification method) before crane arrival.
- ☐ Pads bedded level and in full contact; outrigger feet central on pads; beams fully extended per lift plan.
- ☐ Exclusion checks for nearby excavations, slopes and services recorded.
- ☐ Re-inspection after heavy rain, dewatering changes, relocation or any ground disturbance.

- Any change of crane, configuration or position triggers re-check — not a site-level judgement call.

10. References

- BS 5975:2024 — Temporary works procedures.
- BS 7121 series — Code of practice for the safe use of cranes.
- CPA / Strategic Forum for Construction — ground conditions and crane standing guidance.
- BRE Report 470 — Working platforms for tracked plant.
- BS EN 1997-1 — Eurocode 7: Geotechnical design.

Scaffolding Foundations

Leg loads, baseplates and soleboards, ground and structure assessment, back-propping and settlement control for access and support scaffolds.

1. Purpose and scope

This note covers the foundations of access and support scaffolds: estimating leg loads, sizing soleboards and spreaders, assessing the ground or structure the scaffold stands on, and controlling settlement. It is aimed at TWCs, site engineers, scaffold designers and supervisors working to TG20:21, BS EN 12811-1 and BS 5975:2024.

Tying, bracing and the scaffold structure itself are outside this note except where they interact with foundations (they do — a settling scaffold redistributes load into ties and adjacent standards).

2. Why scaffold foundations matter

- Scaffold leg loads are routinely underestimated: a standard in a loaded independent scaffold can easily carry **10–40 kN or more**, and much higher in support scaffolds, loading bays and beneath cantilevers or beamwork.
- A baseplate alone bears on roughly 0.02–0.03 m². 25 kN through a bare 150 mm baseplate is around 1,100 kN/m² — more than most surfaces can take. The soleboard, not the baseplate, is the foundation.
- Settlement of one leg does not simply lower the scaffold: it throws load onto neighbouring standards and ties, cracks boards and can initiate progressive failure — especially in sheeted scaffolds in wind.

3. Key standards and references

Document	Relevance
NASC TG20:21	Compliance scaffolds — includes foundation and soleboard requirements and leg-load outputs on compliance sheets.
BS EN 12811-1	Scaffold performance requirements, load classes, and foundation adequacy.
BS 5975:2024	Procedural control where scaffolds are designed temporary works; designed foundations.
NASC guidance (SG/TG series)	Good practice on baseplates, soleboards, and scaffolds on structures.
BS EN 1997-1	Geotechnical basis where calculated bearing design is needed.

4. Estimating leg loads

- For TG20:21 compliant scaffolds, take leg loads from the compliance sheet for the configuration (height, bays, load class, cladding).
- For designed scaffolds, leg loads come from the design output — and should be stated on it so foundations can be checked.
- Watch the concentrators: **loading bays, beamed openings, cantilever and truss-out scaffolds, buttress bays, rubbish chutes, hoist towers and sheeted elevations** all push leg loads well above the typical run of standards.
- Include what the scaffold will actually carry: stacked boards and materials at working lifts, mast/hoist reactions, weather protection roofs.

5. Baseplates, soleboards and spreaders

- **Every standard gets a baseplate.** On anything other than sound, designed hardstanding, standards also get a **soleboard** sized to spread the leg load to a pressure the ground can take.

- Soleboards should be sound timber (or proprietary pads) laid flat on prepared ground — not on debris, frozen crust or bridging across ruts. A common minimum practice is at least **two standards per soleboard where practicable**, improving robustness against local soft spots.
- Size by calculation when loads or ground demand it: required soleboard bearing area = leg load ÷ allowable ground pressure; then check the board itself in bending/bearing (a long thin board does not usefully spread load far beyond the baseplate unless it is stiff enough).
- On slopes, cut level steps — never wedge baseplates on packs on a slope.

6. Assessing what the scaffold stands on

6.1 Ground

- Use the same discipline as any foundation: what is the material, is it compacted, what happens when it gets wet, what is buried beneath it?
- Be suspicious of: made ground and recent backfill, service trenches along the scaffold line (they usually are along the building line), landscaping topsoil, and winter softening.
- Protect foundations in use: drainage away from soleboards, no excavation beside standards without TWC approval, vehicle protection where plant passes close.

6.2 Paved and hard surfaces

- Footways and block paving often overlie poorly compacted trench backfill and shallow services — the paving hides the problem; it does not solve it.
- Check for **cellars, vaults and basements under footpaths** in urban streets, and for manhole covers, gully pots and duct runs directly beneath standards.

6.3 Scaffolds on structures

- Standing scaffolds on suspended slabs, podium decks, bridges or roofs is a **designed condition**: the structure's capacity at the actual leg positions must be confirmed by a competent engineer, and **back-propping** provided where required (and itself designed).
- Spreader beams/grillages may be needed to move leg loads to beams or walls rather than mid-slab.

7. Settlement: prevention and response

- Prevent: prepared, drained bearing; sized soleboards; base lift braced and level; adjustable bases within their allowed extension.
- Monitor: include foundations explicitly in the statutory scaffold inspections (before first use, then at intervals not exceeding 7 days, and after weather or events likely to affect stability).
- Respond: any settled, undermined or washed-out base is a stop-and-refer item — relieving and repacking a loaded standard is itself a temporary works operation that needs a method from a competent person, not a hammer and an extra wedge.

8. Illustrative example — soleboard sizing (concept)

Design leg load 25 kN per standard; ground assessed as firm clay, allowable pressure taken as 100 kN/m² for the temporary case:

Required bearing area per standard = $25 / 100 = 0.25 \text{ m}^2$

A 225 mm wide soleboard needs $0.25 / 0.225 \approx 1.1 \text{ m}$ of effective length per standard

So a 2.4 m × 225 mm board under two standards is reasonable *if* the board is thick enough to distribute the load over that length and the ground is as assumed — on softer ground (say 50 kN/m²) the required area doubles and a wider/doubled board or improved bearing is needed. *Illustrative only; use design leg loads and verified ground values.*

9. Site control checklist

- ☐ Leg loads known — from the TG20:21 compliance sheet or the scaffold design — including loading bays and other concentrations.
- ☐ Bearing surface identified and assessed: ground type, backfill/services below, cellars/voids, drainage.
- ☐ Baseplates on every standard; soleboards sized and bedded on prepared ground (no debris, no bridging, level steps on slopes).
- ☐ Scaffolds on structures: capacity confirmed by an engineer; back-propping designed and installed before loading.

- ☐ Adjustable legs within permitted extension; base lift complete and braced before erecting above.
- ☐ Foundations included in 7-day and post-weather inspections; settlement is a stop-and-refer trigger.
- ☐ No excavation, dewatering or heavy plant next to standards without TWC review.
- ☐ Any change of use (extra lifts, sheeting, loading bays, hoists) triggers a foundation re-check.

10. References

- NASC TG20:21 — Guide to good practice for tube and fitting scaffolding.
- BS EN 12811-1 — Temporary works equipment: scaffolds.
- BS 5975:2024 — Temporary works procedures.
- Work at Height Regulations 2005 — scaffold inspection requirements.
- NASC SG/TG guidance series.

Important. This guidance note is provided for general information and awareness only. It is not a design, a design check, or project-specific advice, and it must not be relied upon as such. Temporary works must be designed and checked by competent persons under a temporary works procedure consistent with BS 5975:2024, using project-specific loads, ground information and standards current at the time of design. Standards cited are those understood to be current at the date of issue — always confirm the latest edition and any national annex or amendment before use. No liability is accepted for use of this note outside that context.