Technical Guidance Note:
MECHANICAL FIXING of SIGNS to BUILDING FASCIAS**COMPLIANCE**

David Derbyshire: Technical Committee Chair

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The British Sign and Graphics Association

British Sign & Graphics Association

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Technical David Derbyshire Committee Chair

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BSGA_CONTACT_DETAILS:

British Sign & Graphics Association

BS 559: 2009
Specification for the design and construction of signs for publicity, decorative and general purposes.

Provides guidance on the design, construction, installation, and maintenance of signs, promoting safety, visibility, durability, and compliance across various environments and applications.

https://knowledge.bsigroup.com/products/specification-for-the-design-and-construction-of-signs-for-publicity-decorative-and-general-purposes

BS 7671: 2018
Requirements for Electrical Installations. IET Wiring Regulations.

Provides the framework for the national standard for electrical installation safety, covering design, erection, inspection, and testing to ensure protection against electrical hazards.

https://knowledge.bsigroup.com/products/requirements-for-electrical-installations-iet-wiring-regulations-3

BS EN 1991 - 1 - 4: 2005+A1:2010
Eurocode 1. Actions on structures - General actions - Wind actions.

Provides guidelines for assessing wind loads on structures, ensuring safe design by accounting for wind pressure, turbulence, and structural response.

https://knowledge.bsigroup.com/products/eurocode-1-actions-on-structures-general-actions-wind-actions

BS 8539:2012+A1:2021
Code of practice for the selection and installation of post-installed anchors in concrete and masonry.

Provides best practice guidance for selecting, designing, installing, and testing post-installed anchors in concrete and masonry to ensure safety and performance.

https://knowledge.bsigroup.com/products/code-of-practice-for-the-selection-and-installation-of-post-installed-anchors-in-concrete-and-masonry-1

A PRACTICAL GUIDE...

Signage is an essential element of the built environment, playing a critical role in communication, navigation, branding, and health and safety.

Whether it is directing vehicular or pedestrian traffic, identifying a business premises, providing wayfinding within a complex environment, or managing workplace risks through mandated Health & Safety notices, signage must perform its function clearly, reliably, and safely.

The effectiveness of a sign, however, depends not only on its design and visibility but equally on the quality of its installation. A poorly fixed sign can lead to failures that compromise safety, shorten service life, damage property, and erode brand reputation.

Ensuring that signage is securely and appropriately attached to building fascias and other fixed surfaces is therefore a fundamental responsibility for all sign makers and installers.

This Practical Guide has been developed by The British Sign and Graphics Association to provide detailed advice on mechanical fixing methods for signage installations.

Mechanical fixing - typically involving screws, bolts, rivets, brackets, and related fixings - remains the most common and reliable method of attaching signs to a wide variety of substrates, from traditional brickwork and masonry to modern cladding systems and composite panels.

Whether you are a new entrant to the signage industry or an experienced installer seeking to refresh and formalise your approach, this guide offers practical, up-to-date advice aligned with current professional standards.

Correct mechanical fixing not only enhances the performance and longevity of the sign but also protects the public, the client, and the reputation of the installation contractor.

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A PRACTICAL GUIDE...

BS EN 1090-2:2018+A1:2024
Execution of steel structures and aluminium structures - Technical requirements for steel structures.

Specifies technical requirements for the execution of steel structures, covering fabrication, welding, assembly, and quality control.

https://knowledge.bsigroup.com/products/execution-of-steel-structures-and-aluminium-structures-technical-requirements-for-steel-structures-2

BS EN 12899-1: 2007
Fixed, vertical road traffic signs - Fixed signs.

Specifies requirements for the design, construction, performance, and testing of fixed, vertical road traffic signs to ensure safety, durability, and visibility.

https://knowledge.bsigroup.com/products/fixed-vertical-road-traffic-signs-fixed-signs-3

BS EN ISO 9223
Corrosion of metals and alloys. Corrosivity of atmospheres. Classification, determination and estimation.

Defines methods to classify, determine, and estimate atmospheric corrosivity levels affecting metals and alloys in various environments.

https://landingpage.bsigroup.com/LandingPage/Undated?UPI=000000000030209288

Mechanical sign installation is an essential skill requiring precision, structural awareness, and strict adherence to health and safety standards.

This guide serves as a **practical resource** for both installers and project managers, providing clear guidance on best practices, materials, tools, and compliance with relevant British Standards.

It focuses specifically on mechanical fixing methods used to secure signage to building fascias and other fixed surfaces.

For alternative installation types - such as **adhesive fixing**, **tension systems**, or **freestanding structures** - please refer to dedicated BSGA guidance or contact the Association directly for further training and documentation.

UNDERSTANDING THE FIXING SURFACE...

FOR THE **PURPOSE** OF THIS GUIDE...

The term fixing surface refers specifically to the physical material or structure onto which signage is attached - for example: brickwork, rendered surfaces, or cladding systems.

This definition is used to avoid confusion with the term substrate, which in sign making typically describes the material forming the base of the sign itself, such as aluminium, composite panel, or acrylic.

SAMPLE_COMMON_**FIXING_SURFACES**:

BRICK AND MASONRY:

Brick and masonry surfaces are common fixing points. Proper mechanical fixing requires drilling into mortar or brick, avoiding cracks, and using appropriate expansion anchors or resin fixings.

CONCRETE:

Concrete offers a strong, stable fixing surface. Installation requires correct drilling techniques and selection of anchors rated for concrete loads, considering density, strength, and possible reinforcement.

RENDERED SURFACES:

Rendered surfaces consist of a finish applied over brick, block, or concrete. Fixings must penetrate beyond the render into the structural material to ensure secure anchorage.

METAL CLADDING SYSTEMS:

Metal cladding panels vary in thickness and profile. Fixings must account for material strength, thermal expansion, and waterproofing integrity, often using self-sealing screws or brackets.

COMPOSITE PANELS:

Composite panels, typically aluminium-faced with polymer cores, require specialist fixings. Careful attention is needed to avoid crushing the panel while ensuring adequate load distribution and weatherproofing.

FIXING_TO_COMMON_SURFACES:

FIXING SURFACE:	BEST PRACTICES and GUIDANCE:
BRICK AND MASONRY:	✓ Use expansion bolts, shield anchors, or chemical resin fixings. ✓ Always drill into brick, not mortar joints. ✓ Clean dust and debris from holes before installing fixings. ✓ Avoid over-tightening to prevent cracking or spalling. ✓ Use stainless steel or galvanised fixings for weather resistance.
CONCRETE:	✓ Use SDS+ drills with appropriate masonry bits. ✓ Specify through bolts, drop-in anchors, or resin anchors. ✓ Follow BS 8539 for anchor selection and installation. ✓ Conduct pull-out or proof load tests for heavy signs. ✓ Check for reinforcement (rebar) before drilling.

FIXING_TO_COMMON_SURFACES:

FIXING SURFACE:	BEST PRACTICES and GUIDANCE:
RENDERED SURFACES:	✓ Never mount signage flush; allow ventilation gaps. ✓ Use stand-off brackets or spacer fixings. ✓ Seal around fixings with UV-resistant silicone. ✓ Use specialist fixings for insulated render systems (for example: EJOT Iso screws). ✓ Fix into the underlying substrate, not the render layer..
METAL CLADDING SYSTEMS:	✓ Use rivnuts, cavity toggles, blind rivets, or bonded studs. ✓ Ensure metal compatibility to avoid galvanic corrosion. ✓ Use large washers or backing plates to spread load. ✓ Seal penetrations to maintain cladding weatherproofing. ✓ Verify structural backing behind the cladding sheets.

FIXING_TO_COMMON_SURFACES:

FIXING SURFACE:

COMPOSITE PANELS:

BEST PRACTICES and GUIDANCE:

- ✓ Use low-torque mechanical fixings (e.g., rivnuts, bonded studs).
- ✓ Spread load with oversized washers or backing plates.
- ✓ Pre-drill carefully to prevent delamination.
- ✓ Consider adhesives or VHB tapes for supplementary fixing.
- ✓ Follow panel manufacturer’s guidance on fixing and expansio

ALTERNATIVE_FIXING_METHODS:

FIXING METHOD:	BEST PRACTICES and GUIDANCE:
VERY_HIGH_BOND_TAPE_VHB:	⚠ Suitable for non-loadbearing applications such as mounting lightweight panels, trims, and small signs. ⚠ Surfaces must be clean, dry, and smooth; contamination reduces adhesion strength significantly. ⚠ Use adhesion promoters or primers when bonding to difficult surfaces like low surface energy plastics or painted metals. ⚠ Temperature-sensitive: avoid use in high-heat environments, damp locations, or where thermal cycling could weaken the bond. ⚠ Apply firm, even pressure during installation and allow full curing time (24–72 hours) for maximum bond performance.
POST_MOUNTED_SIGNAGE:	

ALTERNATIVE_FIXING_METHODS:

FIXING METHOD:

POST_MOUNTED_SIGNAGE:

BEST PRACTICES and GUIDANCE:

- Concrete footing depth should typically range between 600–1200mm, depending on post height, soil type, and wind load zone.
- Specify galvanised steel or powder-coated aluminium posts for strength, durability, and corrosion resistance.
- Ensure posts are perfectly vertical during installation and that concrete backfilling is compacted and properly finished.
- Use anti-rotation fixings (for example: clamps, brackets, grub screws) to prevent signage from twisting in wind.
- Follow BS EN 12899-1 for structural design, wind loading requirements, and minimum material specifications for road and public signage

COMMON PITFALLS: HOW TO AVOID THEM.

Choosing the correct fixing method is critical to the safety, durability, and appearance of signage installations. Mistakes during specification or installation can cause premature failure, property damage, or even serious injury.

INADEQUATE FIXING SELECTION:

Select fixings suitable for the substrate, expected load, weather exposure, and lifespan.

Always refer to manufacturers' technical data and relevant British Standards.

WEIGHT LOAD IGNORANCE:

Check the maximum load capacity of each fixing type.

Apply appropriate safety factors (typically 4:1 for overhead signs) to prevent structural failure.

NO PULL TESTING:

Conduct pull-out or proof load tests for heavy-duty or safety-critical signage, particularly overhead or high-level installations, as recommended in BS 8539.

DIRECT FIXING TO RENDERED WALLS:

Never fix signs flush to render. Use stand-off fixings to allow ventilation behind the sign, preventing moisture build-up and deterioration of backing materials.

ALIGNMENT ERRORS:

Always use laser levels, string lines, and templates to pre-mark hole positions.

Double-check measurements to ensure professional, accurate, and visually aligned installations.

SURFACE PREPARATION NEGLECT:

For VHB tapes, adhesives, or chemical fixings, ensure thorough cleaning, degreasing, and drying of surfaces to achieve reliable, long-term adhesion.

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SIGNAGE INSTALLATION CHECKLIST:

A consistent, standards-based installation process ensures safety, durability, and compliance.

Follow this CHECKLIST and manufacturer instructions to maintain best practice across all UK signage projects and environments.

PRE - INSTALLATION:

Site survey completed and signed off, including access, structural assessment, and environmental conditions.

Fixing surface type confirmed (for example: brick, concrete, render, cladding) and assessed for condition and suitability.

Fixing type selected in line with substrate, sign load, location exposure, and BS 8539 guidance.

Pull-out or proof test conducted where required, particularly for overhead or high-load fixings.

Underground or hidden services (electric, gas, water, data) located using CAT scanner or service drawings.

TOOLS and MATERIALS:

Appropriate drill selected (for example: SDS+ for masonry), with drill bits matching fixing specifications.

All required fixings, anchors, bolts, and support brackets sourced and match design requirements.

Weatherproof sealants, spacers, backing plates, or stand-off fixings prepared for use as needed.

PPE available and worn on-site: gloves, safety goggles, hard hat, hi-vis clothing, and fall arrest equipment (if working at height).

Surface preparation tools and cleaning agents (for example: IPA wipes or primers) on hand for adhesive or VHB applications.

SIGNAGE INSTALLATION CHECKLIST:

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INSTALLATION:

Fixing holes drilled to correct diameter, depth, and position, following fixing manufacturer guidelines and survey layout.

Fixings secured properly - tightened to recommended torque without over-tightening to avoid damage or failure.

Minimum 10–20 mm ventilation gap provided behind timber/composite signs when fixed to render or damp-prone walls.

Signs aligned using laser level or spirit level, ensuring visual accuracy and compliance with design intent.

All penetrations and fixings sealed using UV-resistant, external-grade sealant or gaskets to prevent water ingress.

POST - INSTALLATION:

Full visual inspection conducted to check alignment, structural stability, and fixing integrity.

Photographs taken to record sign position, type of fixings used, and overall installation for future reference or warranty.

Site cleaned of all debris, packaging, and offcuts; disposal in line with environmental/site policies.

Where applicable, installation quality reviewed with client or site manager; sign-off obtained and documented.

Maintenance schedule or care guidance provided if specified in client contract or product documentation.

MAINTENANCE CONSIDERATIONS:

Fixing Integrity Checks:

Over time, mechanical fixings can loosen due to wind load, vibration, or thermal movement.

Regular inspections (annually or biannually) should assess bolts, anchors, and brackets for corrosion, fatigue, or displacement - especially for high-level or projecting signs.

Refer to BS 8539 for anchors in concrete or masonry.

Weathering and Corrosion:

UK weather - especially in coastal or industrial areas - can degrade fixings, cladding interfaces, and metal components.

Use corrosion-resistant materials during installation, and schedule routine checks for rust, staining, or surface deterioration.

Reference BS EN ISO 9223 to assess atmospheric corrosivity where appropriate.

Illumination & Electrical Safety:

For illuminated signs, routine inspection should cover water ingress, electrical isolation, and LED or driver failure.

All electrical maintenance must comply with BS 7671:2018 IET Wiring Regulations and should be carried out by a qualified electrician or competent person.

Visual Appearance & Branding Integrity:

Faded vinyl, peeling graphics, or dirt accumulation can impact brand perception.

Clean signs using non-abrasive methods and check for UV degradation or adhesive failure.
Consider scheduled cosmetic maintenance for retail, hospitality, or corporate environments to uphold visual standards.

Structural and Public Safety:

Loose signage poses a public risk, particularly in areas with high footfall or strong wind exposure.

Installers should inform clients of their legal duty to maintain signage in a safe condition, 1. and recommend a documented inspection routine - especially for signs above public highways or entrances.

TRAINING and COMPETENCY:

Signage installers must meet recognised UK industry standards to ensure safe, compliant, and high-quality installations. Core qualifications include the Level 3 Technical Apprenticeship in Signmaking, the NVQ Level 2 in Sign Installation (currently in development), a valid CSCS card, PASMA/IPAF certification for access equipment, BS 8539 anchor installation training, and essential health and safety qualifications, including manual handling.

Best practice recommends refresher training every five (5) years to maintain competency and align with evolving legislation and techniques.

Level 3 Technical Apprenticeship in Signmaking:

This government-recognised apprenticeship provides advanced training in sign design, production, and installation. Developed in collaboration with industry leaders and overseen by the Institute for Apprenticeships & Technical Education, it equips apprentices with core skills in project planning, materials handling, digital and physical production techniques, and installation practices.

It includes independent End Point Assessment and is the UK's only formal apprenticeship for the signage industry.

https://findapprenticeshiptraining.apprenticeships.education.gov.uk/courses/607

NVQ Level 2 in Signage Installation (in development):

This vocational qualification is currently under development by the BSGA to formally assess practical installation skills. It will cover mechanical fixing methods, site safety, client communication, and use of tools and equipment.

Once launched, it will become a key benchmark for sign installation competency in the UK.

CSCS Card (Construction Skills Certification Scheme):

A CSCS card demonstrates that an installer has the necessary training and qualifications to work safely on construction sites. While not mandatory for all signage work, it is often required on new builds, commercial properties, and public sector projects. Obtaining a card typically involves passing a CITB Health, Safety and Environment Test.

https://www.cscs.uk.com/

IPAF (International Powered Access Federation):

IPAF training is essential for operating mobile elevated work platforms (MEWPs) such as scissor lifts or boom lifts, often used in sign installation. Successful candidates receive a Powered Access Licence (PAL card), valid for five years.

Training covers machine inspection, safe operation, and emergency procedures.

https://www.ipaf.org/en-gb

PASMA (Prefabricated Access Suppliers' and Manufacturers' Association):

PASMA certification ensures safe erection, inspection, and use of mobile access towers. It is critical for signage installers working at low to medium heights without powered access equipment.

The course includes practical and theoretical elements, with certification valid for five years.

https://pasma.co.uk/

Manual Handling & Health and Safety Awareness:

Installers must understand how to move, lift, and carry signage materials safely, and be aware of on-site risks.

Training should cover risk assessment, correct lifting technique, use of PPE, working at height awareness, and emergency response procedures.

This is a baseline requirement for anyone working on-site.

BS 8539 Anchor Installation Training:

This training is vital for those installing mechanical or chemical anchors in concrete and masonry. It ensures correct selection, installation, and testing in line with BS 8539. Applicable to critical fixings such as overhead signage, this training may be delivered by anchor manufacturers or certified training providers.

For tailored guidance on training, qualifications, or upskilling your team, BSGA members are encouraged to contact the Association directly for expert advice and access to industry-approved training resources.

TRAINING and COMPETENCY:

ANY**QUESTIONS..?**

The British Sign and Graphics Association

Northgate Business Centre
Northgate
Newark
Nottinghamshire
NG24 1EZ

0845 338 3016

ask@**uksigns**.org

https://**uksigns**.org/