RISE | Retrofit information, support & expertise

Retrofit of non-traditional build type dwellings

Supply chain advice pack

April, 2026

Funded by:

Department for Energy Security & Net Zero

www.riseretrofit.org.uk

Introduction and Purpose

Retrofitting non-traditional (non-trad) homes under PAS 2035:2023 requires a supply chain that integrates professional services, technical specialists, and installation contractors into a coordinated, specialised process. PAS 2035;2023 emphasises the value of professional judgement, competence, and appropriate levels of investigation, making the quality and capability of the supply chain more important than ever. This pack provides guidance on how to structure and manage a supply chain capable of delivering compliant, high quality retrofit to some of the UK's most complex housing archetypes.

Understanding Non-Traditional (Non-Trad) Homes

Non-traditional ("non-trad") homes are UK properties built using construction methods that differ from standard brick or stone with slate or tile roofs, typically emerging between 1919 and the late 1970s to address severe post-war housing shortages. They are called non-trad because they use alternative materials or systems—such as in-situ or precast concrete, steel frames, timber frames, or no-fines concrete—rather than conventional masonry. Commonly known by names such as Airey Homes, Laing Easiform, Wimpey No-Fines, BISF, Cornish Units, Mowlem etc., there are around 1.5 million such homes across the UK, and they are collectively known as non-standard, or non-traditional construction properties. Their defining features include unconventional structural systems, factory-made or poured-on-site components, and materials that can pose challenges for mortgages, insurance, and long-term durability, distinguishing them clearly from traditional builds.

Airey system house

Source: Idn-properties

Laing Easiform house

Source: iconichouses

These properties behave differently from traditional masonry homes, and their retrofit requires enhanced assessment, careful design, and specialist installation. Understanding the specific construction type is essential for safe, effective, and compliant retrofit.

Key characteristics

- Concrete, steel frame or panelised construction
- Limited or inaccurate as-built documentation
- Hidden structural defects common
- Complex junctions requiring bespoke detailing
- Higher likelihood of asbestos
- Moisture and thermal bridging risks
- Often built in large, repeatable estates

Non-trad homes as an archetype are more than likely to require additional works to prepare the building for retrofit works. This may include re-roofing, recladding and ventilation upgrades in addition to other pre-retrofit work.

Timber-frame homes aren't usually classed as non-trad but they are classed as non-masonry and therefore require enhanced assessment and specialist supply chain capability. Timber frame sits somewhere between "traditional" and "non traditional" in terms of retrofit complexity however they are not covered in this advice pack.

PAS 2035 Roles & Professional Services Supply Chain

PAS 2035:2023 requires a unified process where the level of assessment and design is determined by professional judgement, not predefined pathways. For non-trad homes, this typically means more detailed investigation and specialist input. A strong professional services supply chain is essential to ensure designs are safe, appropriate, and technically robust.

Core professional roles

- Retrofit Assessor
- Retrofit Coordinator (and evaluator)
- Retrofit Designer
- Structural Engineer
- Asbestos Surveyor
- Air testing Specialist
- Ventilation Designer
- Damp & Moisture Specialist

These roles help to ensure that appropriate levels of investigation are undertaken, providing technical assurance for sometimes complex structures and defects encountered in non-trad homes. This helps to reduce the risk of unintended consequences and to support compliance with PAS 2035 documentation requirements

Supply Chain Challenges

Retrofitting non-trad homes introduces challenges across both professional and contractor supply chains. These challenges must be anticipated early to avoid delays, redesigns and noncompliance. The complexity of non-trad construction means that generic solutions, assumptions or insufficient investigation can lead to significant technical and financial risks.

Key challenges

- Limited non-trad expertise across PAS roles
- Need for intrusive surveys and structural diagnostics
- Complex moisture and thermal modelling
- Limited availability of certified EWI systems for certain archetypes
- Long lead times for bespoke fixings and structural components
- Scaffolding and access constraints in post-war estates
- High risk of asbestos disruption

- Cost volatility and structural "unknowns"
- Understanding the construction method

Supply Chain Opportunities

Despite the challenges, non-trad retrofit offers significant opportunities for efficiency, innovation, and long term value. Because these homes were built in large, repeatable batches, they lend themselves to standardisation, economies of scale, and predictable delivery models.

Opportunities

- Large volumes of repeatable archetypes
- Standardised design packs and installation processes
- Economies of scale for materials and labour- possibility of off-site system development
- Digital surveying and modelling
- Prefabricated façades and panelised solutions
- Long-term partnerships with specialist contractors
- Upskilling pathways for local workforces

Recommended Supply Chain Strategy

A successful PAS 2035:2023 supply chain for non-trad homes requires early collaboration, clear technical leadership, and structured procurement. Professional services and contractors must be aligned from the outset to ensure designs are robust, risks are understood, and installation is feasible and compliant.

Strategic principles

- Engage professional services early (before option selection)
- Use archetype-specific technical packs
- Build a specialist pool of PAS certified contractors
- Secure long-lead materials early
- Integrate structural engineering into design workflows
- Use manufacturer approved systems and training
- Implement robust risk and contingency planning
- Ensure clear communication between designers and installers

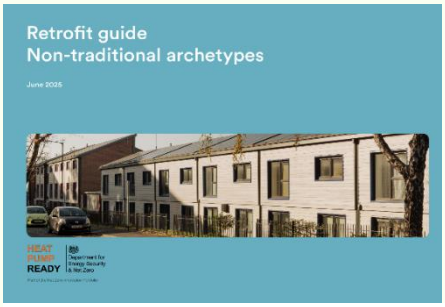
Practical Tools & Templates

To support consistent and compliant delivery, organisations should develop a suite of tools and templates tailored to non-trad retrofit. These will help to standardise processes, reducing design time and ensure that all partners work from the same technical assumptions.

Recommended tools

- Non-trad retrofit risk matrix
- Supply chain readiness checklist
- Professional services procurement specification
- Contractor capability assessment form
- Standardised EWI detail packs
- Resident communication pack
- Programme sequencing template
- Non-trad archetype library

Non-trad archetype



Source: National Retrofit Hub

Resident communication pack

Source: Midlands Net Zero Hub

Key Success Factors

Delivering PAS 2035:2023 compliant retrofit on non-trad homes requires strong collaboration alongside technical competence and disciplined programme management. Success depends on aligning professional services and contractors around shared standards, clear technical requirements and a commitment to quality.

Success factors include:

- Transparent communication with residents
- Integrated collaboration from early stage
- Accurate archetype identification
- Robust intrusive surveys
- Clear, system-specific technical designs

- Reliable, well trained installers
- Strong programme and risk management

Summary

Retrofitting Non-Traditional homes under PAS 2035:2023 demands a supply chain that is technically competent, well coordinated and capable of applying professional judgement to complex building types. These homes present unique structural, thermal and moisture related challenges, meaning that both professional services and contractors must work together from the earliest stages to ensure high quality, compliant retrofit solutions.

A successful approach relies on understanding each non-trad archetype, undertaking appropriate levels of investigation and developing robust, system-specific designs. Standardisation, early engagement and strong technical leadership will create opportunities to deliver retrofit at scale while reducing risk and improving quality. With the right tools, processes and partnerships in place, the supply chain will be well positioned to deliver high quality retrofit programmes, which protect residents and support long term decarbonisation goals.

Key messages

- non-trad homes require enhanced assessment, design and installation due to their construction complexity
- PAS 2035:2023 places greater emphasis on competence and professional judgement
- Early integration of professional services and contractors is essential
- Standardisation across archetypes improves efficiency and reduces risk
- Strong programme management and clear communication underpin successful delivery

A well structured supply chain enables safe, scalable, and compliant retrofit outcomes.

Resources

Podcast: All RISE podcasts are available here.

Podcast: "Tackling Hard to Decarbonise Properties" available here.

Masterclass: All RISE masterclasses are available here.

Masterclass "Navigating RdSAP10" available here.

Advice pack: All RISE advice packs available here.

Advice pack: "Property data" available here).