

SPECIAL JUDGES' AWARD AND COMMENDATION

TBC.London

PROJECT TEAM

Architect: Stiff + Trevillion and ECE Architecture

Structural Engineer: Webb Yates

Structural Engineer (Donor Site): Civic

Main Contractor: Willmott Dixon

M&E Engineer: Atelier Ten

Client: FORE Partnership



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TBC.London transforms a dated commercial building within the Tower Bridge Conservation Area into a mixed-use, workspace-led development. The project retains and selectively adapts the existing concrete frame, using structural steelwork to create new floorplates, reconfigure the cores and add further levels. This approach allowed the building to be extended and modernised while responding carefully to its constrained historic setting.

Steel was selected for its ability to work with the retained structure, provide long spans and support future adaptation. Clear structural grids and coordinated service zones allow building services to be integrated with exposed soffits without compromising headroom. The resulting floorplates can accommodate multiple occupiers and future reconfiguration, extending the building's useful life.

TBC.London is the UK's first major commercial building to incorporate large-scale reuse of pre-war structural steel through its Urban Mining initiative. Approximately 40t of steel removed from The Elephant, the retrofit of a former 1930s department store on Oxford Street, was transferred directly to TBC.London and incorporated into its structure. The reclaimed members were almost 100 years old, establishing a significant precedent for circular construction at commercial scale.

The opportunity emerged after the primary steel strategy for TBC.London had been developed. Rather than treating this as a barrier, the design was reassessed so that reclaimed sections could be accepted without changing the building's structural, spatial or performance requirements. The inherent adaptability of steel allowed load paths, connections and tolerances to be adjusted while maintaining the intended programme and architectural design.

Reclaimed members were used alongside new steelwork within a coherent structural frame. Variable historic section sizes and details required bespoke connection strategies and careful allocation of members. Their dimensions made some sections best suited to the lower levels, while others were used as secondary steelwork trimming risers and openings or supporting plant, minimising their effect on floor-to-ceiling heights.

Demonstrating that the pre-war steel could satisfy modern requirements was central to the process. As the members did not have contemporary certification, they underwent destructive and non-destructive assessment, including tensile, chemical, metallographic and carbon-equivalent-value testing. Newly issued guidance for the reuse of pre-1970 steel was applied in practice, informing material verification, connection design, load paths and performance checks.

Before fabrication, the recovered steel arrived with redundant plates and evidence of its previous use. Each member had to be identified, cleaned, tested, prepared and reworked to contemporary tolerances and connection details. This process retained the structural value of the original material while ensuring that the finished steelwork met the project's requirements for safety, durability and finish.

Delivering the reclaimed steel required close coordination between two unrelated live construction projects. Members suitable for reuse had to be identified and secured before they entered the recycling stream. Demolition, testing, design, fabrication and installation programmes were aligned so that the steel could be transferred directly between the projects without intermediary storage or resale.

The direct transfer avoided storage, resale and procurement interfaces, demonstrating that reclaimed steel can remain a valuable structural product rather than becoming recycled feedstock. It also showed how early commitment and decision-making can manage the risks associated with historic materials within a commercial programme.

The timing added complexity because dismantling at The Elephant was already under way when the opportunity was identified. Accelerated testing and decision-making allowed suitable members to be allocated quickly, while their integration was incorporated into the existing construction sequence. This maintained buildability, safe site operations and programme certainty despite the late change in material supply.

The wider structural design also responded to significant site constraints. New foundations lie within the influence zone of the Tower Bridge anchor blocks, requiring rigorous ground-movement assessments to minimise the effect of additional loading. Retaining the existing concrete frame and adding structural steelwork only where required reduced the amount of new structural material needed while enabling the building's planned vertical extension.

TBC.London achieved whole-building embodied carbon below 300kgCO₂e/m² for modules A1-A5. Alongside the 40t of reclaimed steel, the remaining steelwork was specified with a minimum recycled content of 56%. The fully electric development achieved BREEAM Outstanding at 95.6%, WELL Platinum and NABERS 5-star ratings, and aligns with operational net-zero carbon targets.

The project's influence extends beyond the completed building. Challenges encountered while recovering, verifying and integrating historic steel contributed to the creation of The Engineers Reuse Collective. Launched in 2024, the not-for-profit group provides a forum for practising engineers to implement, demonstrate and champion reuse, turning project-specific experience into shared industry knowledge.

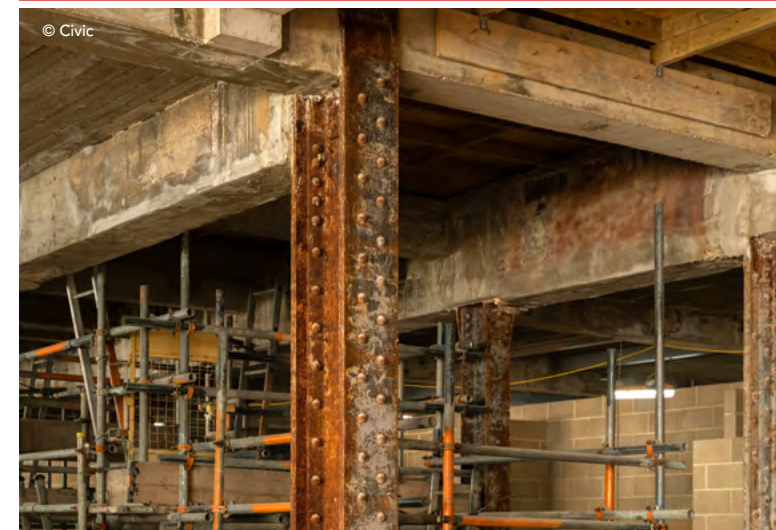
TBC.London demonstrates that steel can support retention, extension and long-term adaptability while also being recovered and reused across project boundaries. Its combination of retained structure, new steelwork and century-old members achieved substantial carbon reductions without compromising performance, safety or programme. By proving that large-scale reuse is commercially deliverable, the project challenges established procurement and construction practices. Its legacy is both a high-performing building and a practical model for a more circular approach to structural steelwork.



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JUDGES' COMMENT

The UK's first major commercial building to incorporate large-scale reuse of pre-war steel, TBC.London has redefined what is possible in circular construction, challenging industry norms and proving that ambitious carbon reduction can be achieved at commercial scale. It inspired the creation of The Engineers Reuse Collective, championing reuse across the built environment, creating a legacy of collaboration, innovation and industry-wide change.



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