



A redundant barn transformed into a sustainable, high-end home through sensitive engineering, preserving rural character and achieving modern performance standards

Location: Hambledon, South Downs

Value: £850k

Architect: Studio Four Architects

Contractor: Agincourt Contractors

Residential / Barn Conversion / Reuse / Modern



Context & Role

AWA began with a comprehensive structural survey to confirm the barn's suitability for conversion, enabling planning consent through the Class Q route. Once approved, we provided full structural design and ongoing support during construction, working closely with the contractor to resolve on-site queries and ensure design intent was maintained from concept to completion.

Design Challenges & Solutions

To accommodate the architect's vision of introducing a new first floor within the existing envelope, AWA designed a self-supporting internal steel frame to carry all additional loads independently of the original structure. This ensured the barn's external frame and historic character remained intact while enhancing stability and performance. Using advanced analysis and modelling, we achieved precise integration between new and existing elements. The design balanced structural efficiency with architectural sensitivity, enabling modern living standards within a retained rural form.

Sustainability & Reflections

Sustainability was central to the project, incorporating photovoltaic panels, an air-source heat pump, and a high-performance building fabric to achieve an A-rated EPC and a net carbon impact of -1.7 tonnes of CO₂ per year. The client and design team expressed broad satisfaction with the outcome — a successful conclusion to a long planning process and a clear realisation of the project vision. A sensitive reuse of a once-redundant structure.

