RETAIN
REPAIR
REFURBISH
RETROFIT
REMODEL
REPURPOSE

CASE STUDY / Hay Castle

Hay Castle is an example of large-scale, retention-led structural engineering applied to a scheduled ancient monument with nearly a millennium of layered history.

Originating in the early 11th century as part of the Norman invasion of Wales, the castle comprises a medieval keep and portcullis alongside a later Jacobean mansion. Repeated fires and periods of abandonment left parts of the structure critically at risk, with significant loss of fabric and longstanding structural deterioration.

engineersHRW's role focused on understanding, retaining and repairing as much of the existing structure as possible, allowing the castle to be adapted for contemporary public use while safeguarding its heritage value. A detailed structural condition survey was undertaken in collaboration with timber and stone specialists, enabling a forensic understanding of the surviving fabric. This research informed a carefully defined schedule of repairs, prioritising stabilisation, repair and reuse over replacement, and providing a clear basis for construction pricing and delivery.

The project involved a comprehensive overhaul of the existing west wing and the reconstruction of the east wing, reusing historic masonry and structural elements wherever feasible. New interventions were designed to work with the existing structure, accommodating modern requirements such as exhibition spaces, education rooms, improved circulation and lift access, while respecting the constraints of the historic fabric. Within the Norman keep, a new viewing platform was inserted with minimal impact, allowing visitors to experience the structure without compromising its integrity.

Throughout the scheme, conservation principles guided structural decisions. Repairs to stonework, timber floors and roofs were undertaken using compatible materials and traditional techniques, ensuring structural continuity and long-term durability. Externally, reinstated elements and repaired openings were handled with restraint, preserving the castle's established character within the townscape of Hay-on-Wye.

The completed project has transformed a fragile, partially derelict monument into a resilient public building,

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