



Beautiful Basements Case Study

House Underpin & New Build Basement - Lapworth, West Midlands

Clients
Waterproofing Designers

Cotswold Oak Ltd.
Beautiful Basements

Background

The property is an old, large countryside house, located just outside Lapworth, West Midlands. The house had fallen into disrepair and was purchased to be redeveloped.

This redevelopment also required extending the property, unfortunately however, planning permission for an extension was very difficult to obtain so a new underground structure was designed to become part of the house, with a linking structure above to incorporate it into the rest of the house.

Construction Method

The first phase was to underpin the sections of the house that the basement would sit against, this was achieved using mass-fill, hit & miss underpinning carried out in 1m sections with 2 layers to avoid having 3m excavations exposed.

The basement was then constructed using mass filled reinforced concrete slab & walls with a traditional block and beam floor creating the ground floor.

Waterproofing Method

Type B – Integral Protection

Externally a perimeter drain, linked to an external pumping station kept water pressure from coming to bear against the walls. The new sections of the basement (walls & floor) were built using reinforced concrete with a waterproofing additive, creating waterproof concrete. All construction joints were waterproofed externally with a cementitious slurry.

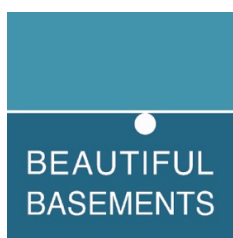
Type C – Cavity Drainage Membrane System

Internally all walls and floor were lined with a cavity drainage membrane and linked to an internal sump and pumping station via a series of perimeter drains.

Waterproofing materials were supplied by Köster UK & Triton Systems Ltd.

Build Programme

4 months



Basement Build
Conversion
Retro-fit
Waterproofing

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