A CONCRETE GHOST RISES IN WARWICKSHIRE

Dubbed “The Ghost House” because of its pale, ethereal appearance and its sunken construction that hides most of the edifice below ground, this bespoke home in Warwickshire, United Kingdom takes its inspiration from the visions of Japanese architect Tadao Ando. The Ghost House is unique in this quiet hamlet not just for its yawning spaces and thoroughly contemporary architecture, but for its cast-in-place concrete construction, which has been left bare throughout the house to exhibit the unique beauty of the material.

CHALLENGE:

The owner set the bar for the project with the simple statement, “I don’t like normal.” In a neighborhood of 1960s-style houses peppered with examples of a few more eclectic architecture examples, he spent nearly ten years and tens of thousands of pounds obtaining permissions to bring his concept to life while designing and planning the sleek and minimalist home’s bare concrete and black steel grid look.

With features including an external stair leading down into a sunken courtyard, Smith was dedicated to a design that evoked the unparalleled designs of Tadao Ando. That meant an entirely concrete construction, cast in-situ, for the unique texture that would define the exposed surfaces throughout the house, both exterior and interior.

This also left no room for error in design and installation of waterproofing, as any defects leading to water ingress, as well as any remedial solutions, would be obvious—and unalterable—for the lifetime of the structure.

SOLUTION:

For a defect-free basement, BPN Architects, working with Jon Johnstone Construction Ltd., chose CETCO Europe Ltd. as the waterproofing supplier. Having collab-
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Orated on numerous previous projects, Jon Johnstone had full trust in CETCO’s solutions and waterproofing experience.

With no room for error in any place in the construction and the requirement that the waterproofing system be hidden fully from view, CETCO defined a solution for a defect-free basement that combined an integral system with an external waterproofing system.

For the cast-in-place concrete used in the structural elements, a Type B waterproof concrete was selected to help ensure the basement walls themselves were resistant to water ingress. These structural elements were then protected with a layer of CETCO VOLTEX® DS Type A waterproofing membrane, its low permeable sodium bentonite encapsulated between interlocked geotextiles to provide a monolithic waterproofing membrane to help keep water away from the below-grade external concrete surfaces. Further, all construction joints were fitted with CETCO WATERSTOP-RX® 101 expanding concrete joint waterstop to provide a positive seal where construction surfaces join.

RESULT:
With the nature of Ghost House’s bare, unfinished interior surfaces, any water ingress would be immediately evident. More importantly, the home features a cinema and rare shoe collection in the basement, making protection from water ingress imperative. The careful and thorough approach to its waterproofing, has paid off, with no water issues so far.

Completed in 2018, the unique and compelling vision that is the Ghost House won the 2019 RIBA (Royal Institute of British Architects) West Midlands Award. It’s been featured in media and magazine covers and was highlighted in a series presented by the Chicago Museum of Architecture as a house that has redefined architecture in the 21st century.