

**TOPPROOF**

Proven performance

USK VALLEY, WALES

The challenge

The Usk Valley location for this development needed a special house to take advantage of the potential views on offer. The plans called for the house to be set into the side of the hill and once complete the use of glass would open up the inside to the stunning views outside. The banking had to be cut away and the house set into the side of the hill. Due to location, the walls had to be designed to remain water tight at all times. The footprint would be dug and set back into the bank and once construction had been completed, the gap between the bank and the house would be back filled. The solution for keeping water and damp at bay was crucial to the build and had to be technically correct. Keeping the water out would be down to construction materials and building expertise.

Our solution

Nudura ICF Walling Technology offered a high speed build using hightech, industry leading, insulated concrete forms. This was chosen as the preferred construction method. TOPPROOF concrete was chosen to provide the waterproof concrete solution to the project. TOPPROOF is designed to incorporate a Krypton waterproof agent which lowers the permeability of concrete. By stopping the transmission of water through the concrete Krypton adds durability and longevity to the concrete by protecting it against chemical attack and corrosion of reinforcing steel. It is a hydrophilic crystalline admixture, used to create permanently waterproof concrete.

Results and benefits

24m³ of TOPPROOF was supplied for the basement wall, a pour for the second lift of 12m³ is planned. TOPPROOF watertight concrete will deliver outstanding levels of water tightness to the project and is used in place of externally applied surface membranes, to protect concrete structures against moisture transmission, chemical attack and corrosion of reinforcing steel. TOPPOOF is better for the environment compared to conventional methods of waterproofing and can add positive points when being BREEAM assessed. It can be used in many applications such as concrete homes including basements, foundations, swimming pools, decks, bathrooms, garages and exteriors.