**BBC Cymru Wales has picked Cardiff for its new state-of-the-art headquarters.** The new 150,000 sq ft headquartered building, which will accommodate 1,200 staff, will be located at the site of the current bus station.

**THE CHALLENGE**
Having developed another building in an adjacent area in Cardiff Centre, within close vicinity of the River Taff and the high water table, Tarmac are well known to the developers Right Acres. Being aware of the challenge to keep the basement areas and cores dry, they would have to dig sink holes at strategic areas and run pumps 24/7 to extract water until the basement was complete. Keeping the water out to Grade 3 standard BS8102 after they were turned off would be down to construction materials and building expertise. The amount of pile caps provided a challenge on its own due to the complex detailing of membranes - this was converted to Topproof.

**OUR SOLUTION**
To create Topproof, Tarmac team up with their waterproof partners Sika who have over a 50 year track record of BBA certificate approved waterproof solutions. Topproof waterproof concrete contains two specially formulated admixtures. The first reduces the water/cement ratio, increasing the density of the mix and minimizing the size of the pores. The second fills the remaining pores ensuring a completely watertight finish. This means there is no need for external membranes, reducing cost and labour. Client engagement early on allowed the solution to be specified.

**RESULTS AND BENEFITS**
Over 1500m3 of Topproof was supplied to the contract and all parties were extremely happy with the results. Topproof is laid in exactly the same way as ordinary concrete so no special skills or equipment are required. However, Tarmac also offered professional, on site support. Topproof is less susceptible to early age and drying shrinkage cracks, which are both common problems when external membranes are applied. It is also better for the environment compared to conventional methods of waterproofing.

For more details contact topproof@tarmac.com or call 0800 1 218 218