



# SIKA AT WORK

## PAPWORTH HOSPITAL, CAMBRIDGE

CONCRETE: Sika® Watertight Concrete  
WATERPROOFING: SikaProof® A and Sikadur 32

BUILDING TRUST



# PAPWORTH HOSPITAL CAMBRIDGE



## SIKA WATERTIGHT SOLUTIONS ENSURE A HEALTHY FUTURE FOR NEW £165 MILLION HOSPITAL

Currently under construction at the heart of one of the largest centres of health science and medical research in the world, the new £140 million Papworth Hospital in Cambridge has seen the application of a comprehensive range of waterproofing solutions from Sika, ensuring this landmark hospital has a watertight and healthy future.

Located on the Cambridge Biomedical Campus, the new 300 bed hospital will replace the existing Papworth Hospital and is being built by Skanska for the Papworth Hospital NHS Foundation Trust. The specialised cardiothoracic hospital will feature 7 state-of-the-art theatres, a 46 bed critical care area including Cardiac Recovery Unit and Cardiac High Dependency Unit, diagnostic and treatment facilities and a 24 bed day ward.

An essential consideration for the basement area is the Sika® Watertight Concrete System which complies with BS 8103:2009 Grade 3 for habitable areas where no water penetration is acceptable. To meet the requirements, Sika provided the specialist RC frame contractor Whelan and Grant with a dual system of more than 2,000m<sup>3</sup> of Sika® Watertight Concrete and 16,000m<sup>2</sup> of the company's innovative Sikaproof® A-08 membrane system.

This combination of a membrane system and watertight concrete offers a dual approach to minimise risk and deliver outstanding levels of watertightness to both the basement and ground floors.

Steve Wood, Contracts Manager, Whelan and Grant, commented: "There was a high water table on this project so a dewatering system

had to be kept running whilst the basement walls were being built. There was also the challenge of the excavation cut line being steep and close to the building which meant access to the basement walls was restricted. This had to be thought about and considered at all times when jointing and making good the Sikaproof® A-08 membrane."

The membrane surface of SikaProof® A is embossed with a grid pattern, which contains a sealant, and is topped by a thin layer of fleece which forms a mechanical bond to the concrete when it dries. The grid pattern is also unique. It offers additional protection, due to the integrated sealant, which bonds tightly with the surface of the concrete, forming mini watertight compartments. Therefore, even if the membrane is damaged or pierced, moisture or pressured water cannot spread between the membrane and the concrete structure as it is contained within the small damaged grid square.

"Liquid gas barriers were also used on the tops of the pile caps," added Steve Wood. "As the basement raft slab formed the top of the pile cap, the Sikaproof® A08 membrane stopped at the pile cap, lapping onto the Sikadur®-32 liquid applied membrane which was on top of the pile cap."

Sika is the only manufacturer to offer a complete range of waterproofing solutions covering membranes and watertight concrete as well as specialist mortars and renders for refurbishment applications. By providing this range, the company is ideally placed to offer architects, contractors and consultants a single solution approach that offers the highest levels of water ingress protection, whilst minimising any risk.

With this state-of-the-art hospital set to open in 2018, the successful application of the Sika Waterproofing System will provide one of the leading centres for heart and lung medicine in the UK with a reliable and long-term waterproofing solution that will protect the life of the structure. **For further information call 0800 292 2572.**



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