Protecting high rise from water penetration

he AAP Centre in Sydney stands tall among the conglomerate of city skyscrapers. Recent maintenance works will guarantee the structure remains well protected into the 21st century.

The centre is a 46 storey building of which construction was completed in 1982. The exterior consists of three sets of concrete trusses on levels 16, 30 and 43 finished in a high quality off-form concrete giving the building a striking facade.

The building asset manager, Commonwealth Financial Services on behalf of the Commonwealth Bank Officers Superannuation Corporation, is committed to maintaining this landmark structure in the best possible condition.

As part of on-going maintenance procedures, the property manager, Colliers Jardine, turned to Miller Milston Ferris which were the consulting structural engineers on the design of the building to carry out an investigation into the condition of the concrete.

The assessments of the concrete in the six metre high trusses revealed it was in good condition. However, it was considered that, because of the unique and complex construction of the trusses, water penetration should be avoided.

Owen Holden from Miller Milston Ferris contacted Dry-Treat (Australia) for a solution and the company recommended the application of Dry-Treat 100N, a pure alkyl silane.

The product works by impregnating the concrete rather than acting as a coating. It provides long term protection against moisture ingress and the associated risk of rusting or corrosion of steel caused by soluble salt penetration or carbonation.

Dry-Treat 100N does not cause discolouration of treated surfaces, therefore allowing the original appearance of the building to be preserved.

Remedial Engineering carried out the application of Dry-Treat 100N. The product was easy to apply despite difficult access and weather conditions.

Surfaces to be treated were first high pressure water cleaned to ensure even absorption of the chemical. The depth of uniform penetration achieved was greater than 4.5mm giving the treatment long-term protection against weathering.

The chemical also tracked along fine cracks and penetrated over 3mm either side of the cracks.

"The participation by the Dry-Treat company in ensuring that the material was properly applied was very useful," said Mr Holden.

The recent maintenance works on the AAP Centre will ensure it has an enduring place in Sydney's skyline.

Further information, Dry-Treat (Australia), free call: 1800 675 119.

The refurbished AAP Centre