

ST PETERS RESIDENTIAL APARTMENTS

St Peters NSW, Australia



SYSTEM**ARDEX**
PREMIUM PERFORMANCE

A block of residential apartments in St Peters (Sydney) has added weight to a pilot scheme currently underway in New York.

The 'Cool Roofs' initiative, spearheaded by NY Mayor Michael R Bloomberg and former vice president Al Gore, involves coating the roofs of various city buildings in a reflective white coating to reduce cooling costs, energy usage and greenhouse gas emissions. Their research reveals a cool roof absorbs 80 per cent less heat than traditional dark roofs and can significantly lower indoor temperatures.

The St Peters apartment block, built in 2002, was experiencing a number of minor roof leaks and the body corporate sought a new-generation refurbishment solution that would give longer service than the original waterproofing membrane and deliver acceptable environmental credentials.

A brand new Ardex product, launched in November 2009, was specified for the 500m² flat roof – Ardex **TPO** is a white coloured, high performance waterproofing membrane that was originally chosen for its ease and speed of application and exceptional durability.

However, during completion of the job, a resident of one of the top storey penthouse apartments approached the Ardex accredited installer and reported that, since the application of the waterproofing membrane, he had experienced a significant drop in temperature inside his apartment. "On a hot day, the temperature in my apartment has dropped four degrees since the new roofing membrane has been installed. I am no longer using my air conditioner as much – and my three top floor neighbours have reported the same thing," said resident Voytek.

The **TPO** membrane comprises thermoplastic polyolefin combining polypropylene and ethylene propylene rubber. The scrim-reinforced membrane combines the durability of rubber with the heat welding properties of a thermoplastic in a flexible sheet. In addition, the membrane can be affixed with a water-based adhesive.

The white colour of the product creates a heat-reflective index of 70 per cent – and a high proportion of this index is retained for the lifetime of the membrane due to its colour-fast retention properties.

In addition, the **TPO** membrane exhibits excellent resistance to the propagation of discolouring bacteria that reduces the heat reflectivity and energy efficiency.

This membrane has also been designed to support 'green' roofs – the product has passed the FLL (German Landscape Research, Development and Construction Society) test for root penetration resistance for roof gardens using lightweight and low maintenance sedum vegetation.

An immediate advantage of the **TPO** product over more conventional waterproofing membranes is its ease of installation.

The fact that the membrane offers single ply protection with fast, hot air welded seams delivers a rapid, safe (no naked flames) installation process. Environmentally the **TPO** waterproofing membrane has some impressive advantages – its chlorine-free, non-halogenated and plasticizer-free formulation, in combination with the hot-air welded seaming method, produces no emissions harmful to the environment. The membrane can be easily recycled - and has a lower manufacturing footprint than comparable systems.



PROJECT REFERENCE – WATERPROOFING

