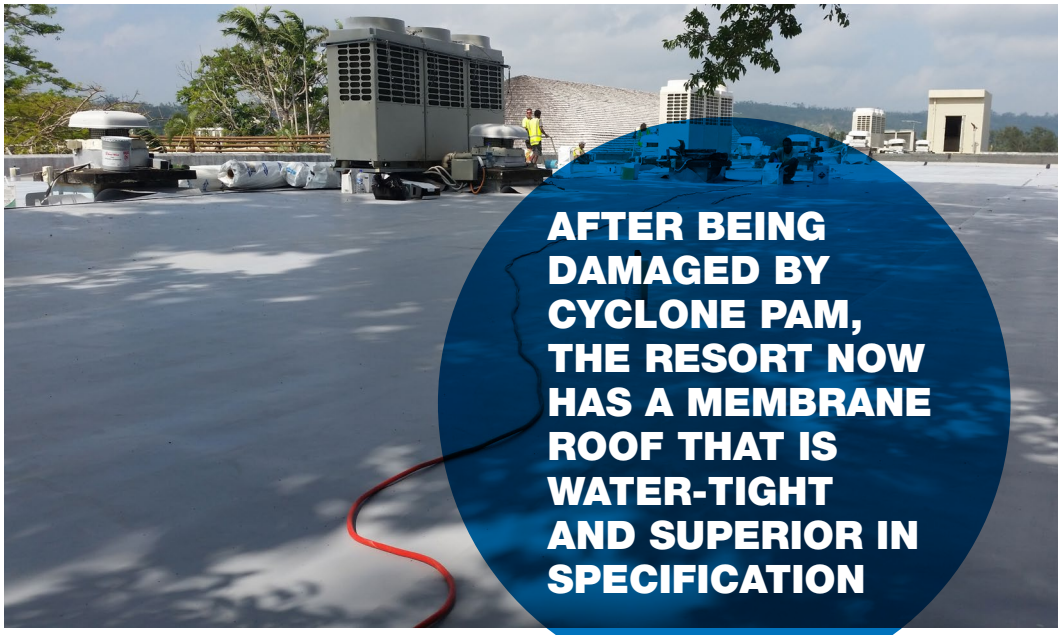

AFTER BEING DAMAGED BY CYCLONE PAM, THE RESORT NOW HAS A MEMBRANE ROOF THAT IS WATER-TIGHT AND SUPERIOR IN SPECIFICATION

RE-ROOFING AFTER CYCLONE PAM – PORT VILA, VANUATU

CHALLENGE: CYCLONE PAM TORE THROUGH VANUATU IN 2015; FLATTENING ENTIRE VILLAGES AND KILLING DOZENS OF PEOPLE. A FLAGSHIP HOTEL IN THE CITY OF PORT VILA FAIRED BETTER THAN MOST, BUT THE UPLIFTING OF SOME OF THE ALREADY OLD AND FAILING SINGLE-LAYERED BITUMINOUS MEMBRANE ON ITS FLAT ROOF, RENDERED THE NEED TO REPLACE IT SOONER THAN EXPECTED.

Solution

The roof's robust concrete substrate was a big benefit, as it would not have decayed from years of leaking as a timber sarked substrate would have.

With the roof area being 2200m2, avoiding substrate replacement meant precious savings in time and expense. Viking Roofspec was consulted by its local approved applicator - Roofing Vanuatu, to suggest a remedial specification. Viking suggested a FBS membrane (fleece-backed system) to be overlaid over the entire roof. A fleece-backed membrane is one with a factory-applied fleece on its underside; designed to 'bed-in' and therefore forgive rough and uneven surfaces.

To begin the process, the applicator had to ensure all of the existing membrane was 100% fully-bonded; with the cyclone having left sections with many loose membrane flaps. To ensure a fully-bonded surface that would provide a reasonably even surface for the replacement membrane to overlay, the loose flaps were cut-out and disposed-of and in-fill pieces of bituminous membrane were torched in their place.

Viking Enviroclad F.B.S. was then laid directly on top. With its 3.6m wide x 30.4m long rolls, the membrane had very few seams – minimising potential leak points. What's more, Enviroclad TPO seams are heat-welded at 400+ degrees Celsius to ensure 100% impervious joins. The smooth, light-grey surface also rendered a solar radiation reflectivity performance of over 40%; eight-fold higher than that of the old black bitumen which was absorbing tropical sun; thus providing the building with unwanted extra heat.

The membrane was fastened to the existing surface using Dual Cartridge F.A.S.T. - a polyurethane adhesive system with unrivalled bonding properties which achieve maximum wind uplift resistance. Further peace-of-mind to the resort owner came through the presence of an experienced New Zealand-based Viking Approved Applicator who had travelled to Vanuatu for the entirety of the re-roof as project manager, combining his expertise with that of the local applicators.

Result

After being damaged by Cyclone Pam, the resort now has a membrane roof that is not only water-tight, but significantly superior in specification to the membrane that was there before. It has superior solar reflectivity; minimal seams which are heat-welded; maximum wind uplift resistance thanks to the F.A.S.T. adhesive system , but most importantly – it's now water-tight. The new membrane roof will protect the building from the elements for at least 20-years – the period of the product warranty protecting the membrane.

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