



## Case Study

## Viking Warm Roof

### Controlling the Climate for Visitors and Plants Christchurch Botanical Gardens

#### Challenge

The iconic Christchurch Botanical Gardens visitor centre has a complex roof - a 1000m<sup>2</sup> saw tooth design with termination points involving glass along with a multitude of different penetrations.

As the self-proclaimed 'Garden City', it was important to create a comfortable environment for both the plants and the 1.4 million visitors per annum; particularly during the colder months.

The new building was designed by award winning Auckland Architect Pattersons with design and installation of the roof taking 4 years from start to finish due to the interruption of earthquakes.

#### Solution

In an attempt to meet the comfort requirements Viking Roofspec recommended installation of a Warm Roof due to its ability to insulate the building and work into the design of the saw tooth roof. The Warm Roof system comprised of a white Enviroclad membrane at 1.5mm thick adhered over polyiso insulation panels of 76mm thickness, and a vapour barrier. The Enviroclad seams are always heat welded for the ultimate in waterproofing protection.

White Enviroclad was used as it provides 92% solar reflectivity, (which provides numerous energy savings benefits). The R-Value (measure of thermal resistance) of the Warm Roof system is the highest in the construction industry and is pivotal to creating a comfortable internal environment throughout the seasons at the visitors centre.

There were a number of challenges that came to Viking and Waterproofing Concepts' attention during the project:

- Multiple redesigns from the glass manufacturers required changes to the roof design at the termination points
- Winter weather
- Substrate issue had to be addressed before Viking could install their Warm Roof solution
- Coordination of contractor and sub-trades to deliver the project on time

These were all challenges overcome by the architect, main contractor, Viking and Waterproofing Concepts, through a coordinated professional and focused approach utilising great teamwork and collaboration across the key stakeholders. It was all about taking care of the detail to ensure a watertight finish.

#### Result

With the Viking Warm Roof System installed, the Christchurch Botanical Gardens visitors centre was able to acquire a great looking roof incorporated into the overall aesthetics of the building, and more importantly achieve a watertight roof finish that protects the building and its inhabitants from the elements.

Christchurch Botanical Gardens were also able to achieve the ultimate in quality assurance with the acquisition of a Viking Full System Warranty. This allows for greater risk minimisation as the warranty covers both the product and the installation under one process.



**Waterproofing Concepts**  
James Kirkpatrick  
Phone: 021 1977 196  
www.wpconcepts.co.nz



**T.** 0800 729 799  
**F.** 0800 729 788  
info@vikingroofspec.co.nz  
www.vikingroofspec.co.nz