



Warm Roof Overlay: Citta Apartments Case Study

When a 105-unit residential complex in Auckland's CBD required a roof refurbishment, the Viking Roofspec WarmRoof system provided the solution - transforming a leaking, thermally inefficient roof into a high-performance assembly without displacing residents or generating landfill waste.

The Challenge

On the corner of Khyber Pass and Symonds Street in Auckland City stand the Citta Apartments - 105 residences, 90 carparks and ground floor commercial premises. The low-pitch metal roof presented multiple issues: dozens of leaking penetrations, failing butyl rubber in internal gutters, and poor energy efficiency that impacted residents' comfort and costs.

The critical constraint was operational continuity. Relocating over 105 residential units during traditional roof replacement would impose enormous disruption and expense. Would it be possible for the 2,100m² roof to be transformed while the residents remained in place, with minimal impact on daily lives?

The Solution: Strategic Overlay Approach

Rather than tear off the existing roof - displacing inhabitants and filling landfills with construction waste the decision was made to retrofit the existing metal roof with a Viking WarmRoof system; protected by a Viking Enviroclad membrane. This would allow the residents to remain in situ throughout construction. It would also eliminate demolition waste and avoid exposing the building interior to weather.

Three-Stage Installation Process

Stage One: Substrate Preparation

With the building completely shrink-wrapped, the contractor lifted sections of existing metal roofing to inspect for any possible structural decay. Fire-proofing upgrades were installed at the same time. Being an overlay the existing metal roof (deemed as structurally sound), was then fastened back down and converted to a warm roof vapour barrier by meticulously sealing and taping all air gaps in the roof body and perimeter. Internal gutters were rebuilt with compliant falls and new TPO-weldable scuppers were installed for reliable drainage.

Stage Two: Thermal Upgrade and Waterproofing

The team installed 75mm thick Kingspan Polyiso insulation board (R-2.8 LTTR) adhered to the metal substrate using the system's specialised two-part polyurethane foam adhesive. This eliminated mechanical fasteners that would penetrate the vapour control layer. Following insulation, 1.52mm thick Enviroclad membrane with proprietary accessories completed the waterproofing system, with heat-welded seams creating monolithic coverage across the entire roof.

The R-2.8 continuous insulation delivered immediate comfort improvements and reduced heating and cooling costs; especially for the top-floor residents who'd been previously exposed to Auckland's temperature extremes through the poorly insulated metal roof.

Stage Three: Walkway Innovation

Initial plans called for traditional pedestal-supported walkways requiring 60-80 membrane penetrations -each a potential failure point. Through collaboration between the Viking Approved Applicator and main contractor, they specified proprietary



heat-welded Enviroclad walkway that rolls directly onto the membrane. This avoided penetrating the membrane while providing robust, grippy maintenance access.

This decision exemplifies experienced applicators adding value through system knowledge. Eliminating dozens of roof penetrations significantly reduced future maintenance requirements and leak risks over the system's 20-year-plus service life.

Installation Challenge

Existing parapets varied considerably in shape and width, making the installation of continuous large membrane sheets impractical. The installation team applied smaller, workable Enviroclad sections with strategically positioned lap joins to avoid creasing. Each lap received proper heat welding to maintain waterproofing integrity.

This adaptive approach demonstrates the importance of skilled crews who understand building science principles and can modify standard procedures for site-specific conditions. While specifications provide guidance, successful projects depend on experienced practitioners applying sound judgment.

Project Coordination

Having taken years to secure refurbishment approval, all stakeholders approached the construction cautiously. The occupied building environment demanded extensive planning, operational flexibility, and careful coordination to minimise resident disruption

while maintaining productivity.

Shrink-wrapped weather protection allowed work to proceed despite Auckland's variable climate, while staged installation permitted sections to be completed and made watertight before moving to adjacent areas. Regular communication between waterproofing contractor, main contractor, consultants, and Body Corporate ensured prompt issue resolution.

Performance Outcomes

The completed installation demonstrates first-class workmanship exemplifying Viking licensed installers' skill. Consultants, architects, and Body Corporate expressed strong satisfaction, subsequently proposing the same approach for similar occupied-building retrofit projects.

Thermal Performance: The R-2.8 insulation with eliminated thermal bridging significantly reduced heat loss and gain.

Waterproofing Integrity: Viking's wide sheet Enviroclad membrane with heat-welded seams eliminated chronic leaks. The rebuilt gutters with compliant falls ensure reliable drainage.

Environmental Impact: Overlaying rather than replacing the existing roof avoided landfilling several tons of roofing materials while achieving superior performance.

Operational Success: Zero resident displacement, minimal daily disruption, and completion while building remained fully operational.

Key Lessons for Roofing Professionals

Substrate Assessment is Critical: Structural evaluation and selective repairs before overlay cannot be rushed. Discovering substrate issues after installation creates expensive remediation.

Vapour Control Requires Diligence: Converting existing metal to a vapour barrier demands meticulous air sealing. Incomplete sealing allows moisture migration causing condensation and performance degradation.

Design Flexibility Adds Value: The walkway modification shows how experienced applicators can suggest improvements reducing costs and improving reliability during construction.

Quality Installation Pays Dividends: Stakeholder satisfaction reflects skilled execution by licensed installers. Quality workmanship creates references, repeat business, and industry credibility.

Market Opportunity

The project's success highlights important trends in New Zealand's building sector. Thousands of structures built before modern energy efficiency standards face aging roof assemblies requiring replacement within the next few decades. The Citta Apartment project demonstrates warm roof overlay provides a viable path, improving performance without replacement costs and disruptions.

For roofing contractors, this creates significant opportunity. Building owners are increasingly seeking solutions to enhance performance without operational disruption. Developing warm roof overlay expertise positions contractors to serve this growing market through specialised technical capabilities.

Conclusion

The Citta Apartment refurbishment exemplifies how warm roof overlay technology solves multiple challenges simultaneously - delivering superior thermal performance, reliable waterproofing, negligible construction waste, and minimal occupant disruption.

As building owners face aging roofs and increasing pressure to improve energy efficiency, contractors with warm roof expertise will find growing opportunities to deliver value through innovative overlay solutions. 🏡

For more information on overlay solutions provided by Viking Roofspec please contact 0800 729 799 or visit www.vikingroofspec.co.nz