THERMOSASH

Unitised Facades

TOTAL CLAD SOLUTIONS

Thermosash
BUILDING ENVELOPE SOLUTIONS™

Thermosash Commercial Ltd

158 Central Park Drive, Henderson
Auckland 0610, New Zealand

www.thermosash.co.nz

Thermosash Thermal Break

PW1000-TB160 / TB200
Structurally glazed Thermal Break
High Performance Unitised Curtainwall

PW400TB-160
Mechanically glazed Thermal Break
High Performance Unitised Curtainwall

Thermosash Systems

- Acoustic & Acoustic secondary glazing systems
- Twin Skin systems
- Thermal Break systems
- Seismic systems
- Structural Glass Assemblies

Rainscreen Materials

- Aluminium
- Terracotta
- Glass
- Large Format Porcelain
- Zinc
- GRC
- Stainless Steel

Our Unitised Systems offer the benefits of **local off-site fabrication,** modern construction techniques, and near limitless design possibilities...

bringing your boldest architectural visions to life whilst delivering practical benefits such as speed of installation, reduced risk, just-in-time site delivery, and single point warranty.

Shape the future of urban design and aesthetics with a high performance Thermosash Unitised Facade solution. We have five decades of building envelope experience to bring to your table.

Our Aluminium is **green** to the core.

Thermosash is partnered with a NZ-owned extruder providing the lowest embodied carbon aluminium readily available in New Zealand*. The combination of high recycled content and low carbon virgin material forms the high quality extrusion that Thermosash uses.

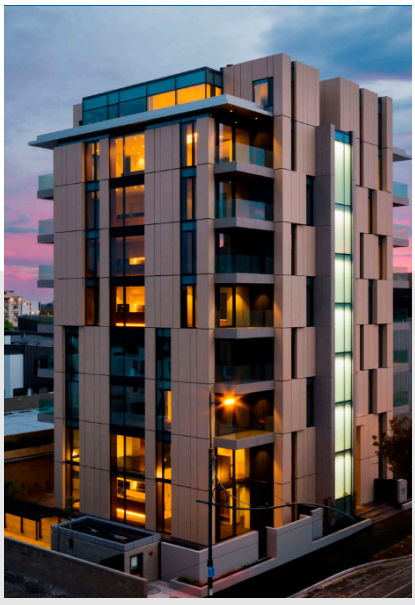
*Achieving Toitū Carbonreduce certification which far out performs the global average. (Independent audits to stringent European standard PAS 2050 are regularly undertaken, please contact us for the most up to date carbonreduce CO2e/kg of aluminium figures).

Thermosash recycles 100% of all metal waste products produced during manufacturing operations.

We exclusively use local powder coaters who have stringent chemical handling processes and reuse or responsibly dispose of all waste powder.

Spark HQ
CHRISTCHURCH

School of Science 302
UNIVERSITY OF AUCKLAND



Armagh Str Apartments
CHRISTCHURCH

THERMOSASH

UNTISED FACADE SOLUTIONS

Thermosash excels in the design and delivery of specific engineered prefabricated façades. Our team's commitment to meticulous engineering ensures that each project, from concept to construction, meets structural and environmental loading, ensuring the high performance facade solution is code compliant, buildable and warrantable.

Thermosash stands out as the exceptional choice for handling any commercial sector project from low-rise structures to towering high-rise applications with low complexity facades to highly complex engineered features, as well as features that have never been undertaken in New Zealand. We have the knowledge and expertise to push the boundaries in design.

Our vast manufacturing capacity, cutting-edge technology, and in-house engineering enable us to tackle multiple projects concurrently while maintaining precision and quality. We offer a 10-year warranty on our unitised façade systems, demonstrating our confidence in the quality and durability of our products and our commitment to long-term performance.

Project Experience

As a 100% New Zealand-owned and operated company for over 5 decades, Thermosash has played a pivotal role in turning architectural concepts into buildings that enrich the cities across the country. In response to New Zealand's seismic considerations and advancements in maintenance-free materials, we've developed, tested and installed hundreds of lightweight, fully integrated metal/glass cladding systems that stand the test of time. Below are a few examples of projects we have delivered in recent years.

BEATRICE TINSLEY BUILDING - UNIVERSITY OF CANTERBURY

The building forms part of the university's science precinct and has been constructed with a LVL timber structure and our high performance Thermosash PW1000 unitised curtainwall integrated with terracotta tile cladding.

SOCIAL SCIENCES BUILDING B201 - UNIVERSITY OF AUCKLAND

B201 achieved a world-leading 6 Star Green Star NZGBC design rating. The existing 50 year old concrete clad building was reclad with our low-carbon high performance PW1000 unitised curtainwall integrated with our Thermoplank Unitised Rainscreen on the North & East Towers. The podium is PW1000 unitised curtainwall with IGU glazing integrated with external vertical fins.
Thermosash won the 'Excellence in Facade Sustainability' award in the 2025 Australasia ZAK Awards for Excellence in Facade Design and Engineering for the low-carbon high performance B201 facade.

HOLIDAY INN REMARKABLES PARK - QUEENSTOWN

The five storey, 182-room hotel has a mixed use ground level with retail and restaurant facilities.

Above ground level the installation includes our Thermosash PW1000-TB160 unitised thermal break suite incorporating thermal break sliding doors and vertical and horizontal shading elements. The ground level includes our Thermosash PW400 unitised curtainwall and rainscreen cladding.

HEKE RUA NATIONAL ARCHIVES WELLINGTON

Heke Rua Archives New Zealand is a 9-level heritage campus situated in Wellington - Thermosash engineered, manufactured and installed a highly insulated, thermally isolated near zero air-leakage unitised façade system, representing one of the highest performing facade solutions in NZ to comply with Conservation of Cultural Heritage code BS/EN 16893. The facade is a high performance thermally broken curtainwall system, Thermosash PW1000-TB200 structurally glazed and PW1000-TB200 opaque curtainwall system with hook on aluminium rainscreen panels.

PREFABRICATED UNITISED SYSTEMS

STREAMLINE CONSTRUCTION

Unitised facades and the Rainscreen Assembly with Barrier (RAB) or similar represent distinctly differing methodology approaches to building exterior facade systems. Thermosash specialise in prefabricated unitised facades which have definite advantages over constructing using an air/moisture barrier fixed to a build up of framing especially on large commercial projects where quality, precision and construction programme time are critical factors.

Unitised vs RAB or similar methodology

WHILE THE INITIAL MATERIAL COSTS FOR UNITISED FACADES MAY BE HIGHER, THE OVERALL COST SAVINGS FROM REDUCED LABOUR, SHORTER CONSTRUCTION TIME, BETTER QUALITY CONTROL AND PRECISION, HIGHER PERFORMANCE AND LOWER LONG-TERM MAINTENANCE MAKE UNITISED FACADES A MORE COST-EFFECTIVE CHOICE OVER THE LIFE OF THE BUILDING COMPARED TO RAB OR SIMILAR CONSTRUCTION METHODOLOGIES.

PERFORMANCE & QUALITY

PREFABRICATED UNITISED SYSTEMS

- Thermosash unitised systems are engineered to meet seismic, climate and building importance level demands unique to each site - offering high performance solutions.
- The unitised systems are designed to incorporate a variety of cladding materials: GRC, terracotta, zinc, porcelain stone etc.
- Engineered and prefabricated integration of insulation, glazing, and other components into a single unit, providing better thermal and acoustic performance. The factory-controlled environment ensures these elements are exactly sealed and aligned.
- The factory environment allows for quality assurance control at all stages of the manufacturing process.
- The high-quality of materials, precision manufactured units and experienced install teams lead to a high performance energy efficient facade providing quality interior comfort, with lower maintenance costs over the life time of the building.

RAB OR SIMILAR

- Performance and quality of the end as-built system is dependant on precise detailing in design and construction - weather conditions, the quality of the supplied materials and handling on site, and on-site workmanship and capabilities are risk factors.
- Precise integration of components is dependant on the capabilities of the various trades.
- There is a higher chance of inconsistencies or defects occurring. Defects in the barrier installation or through poorly or unsealed penetrations can lead to moisture-and air leaks.
- Incompatible materials can cause gaps, cracks, or delamination, which can compromise the system's integrity and allow water infiltration.
- Thermal bridging can lead to localized areas of heat loss, condensation, and reduced overall thermal performance of the building envelope, potentially resulting in higher energy costs and discomfort for occupants.

CONSTRUCTION PROCESS

PREFABRICATED UNITISED SYSTEMS

- Reduced number of junctions with other trades if Thermosash engineers, manufactures and installs the building envelope elements.
- Just-in-time delivery coordination with installation team reduces clutter on site and the need to store materials.
- Reduced number of council inspections during construction and possible delays, saving on compliance costs. Thermosash has an in-house approved producer statement author.
- Fabrication continues during inclement weather conditions, reducing site delays.
- Thermosash takes responsibility and the risk for the installed facade solution offering a 10 year warranty with maintenance compliance conditions.

RAB OR SIMILAR

- Multiple trade responsibilities for the design, working drawings and Producer Statements of the various components.
- On-site assembly with all materials brought to site and the facade is built incrementally - requiring site storage and significant on-site labour and co-ordination between trades.
- Follow on trades can be negatively impacted by Council compliance pathway from different subcontractors - sign off and fixing of defects is required before proceeding to next installation sequence - and must be site managed/supervised by the Main Contractor.
- Inclement weather can negatively impact installation and cause delays.
- No clear line of responsibility for the 10-year warranty risks when using different trades if the end as-built product is found defective.

SPEED OF INSTALLATION

PREFABRICATED UNITISED SYSTEMS

- The modular nature of the unitised products, which fit together like a Lego assembly, enable the rapid closing in of a building saving on programme time.
- Reduction in scaffold and crane requirements.

RAB OR SIMILAR

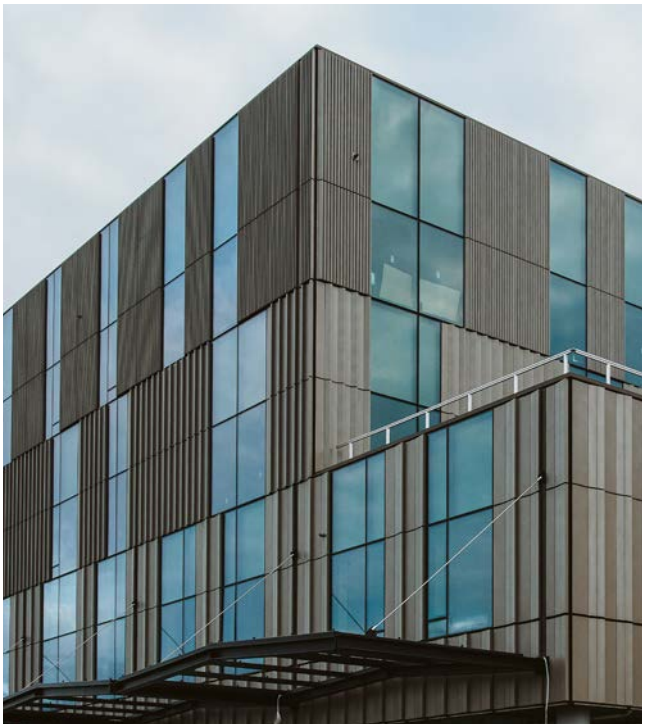
- The on-site assembly of each component can be time-consuming leading to slow installation and longer construction time frames.
- Scaffolding and cranes are often required for these types of installations.

PREFABRICATED UNITISED SYSTEMS
WITH SEAMLESS INTEGRATION

A key advantage of our Thermosash engineered unitised suites is the ability to integrate elements seamlessly, reducing junctions between trades which significantly increases on site productivity, and reduces construction programme time frames.

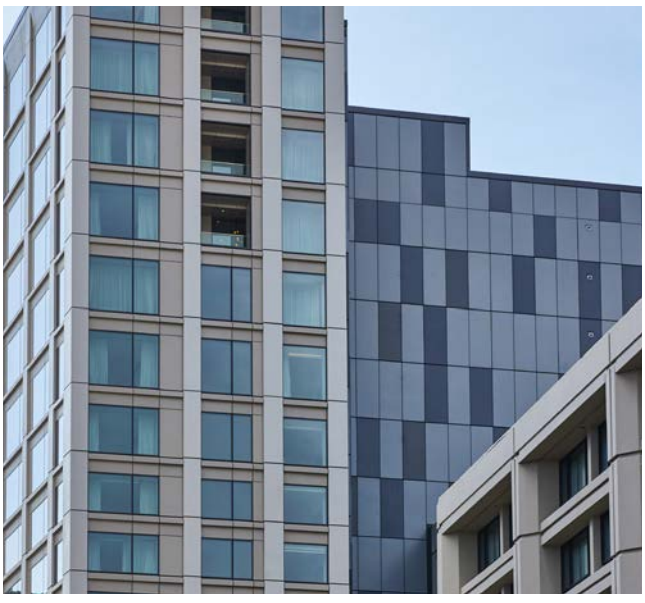
A large variety of materials can be accommodated and additionally the brackets required for solar shading, signage, downpipes and other ancillary projections can in most cases be fixed to the facade panels with no additional structure required and without compromising weathertightness.

Prefabricated Thermosash Thermoplank unitised rainscreen, packed for transport to site.

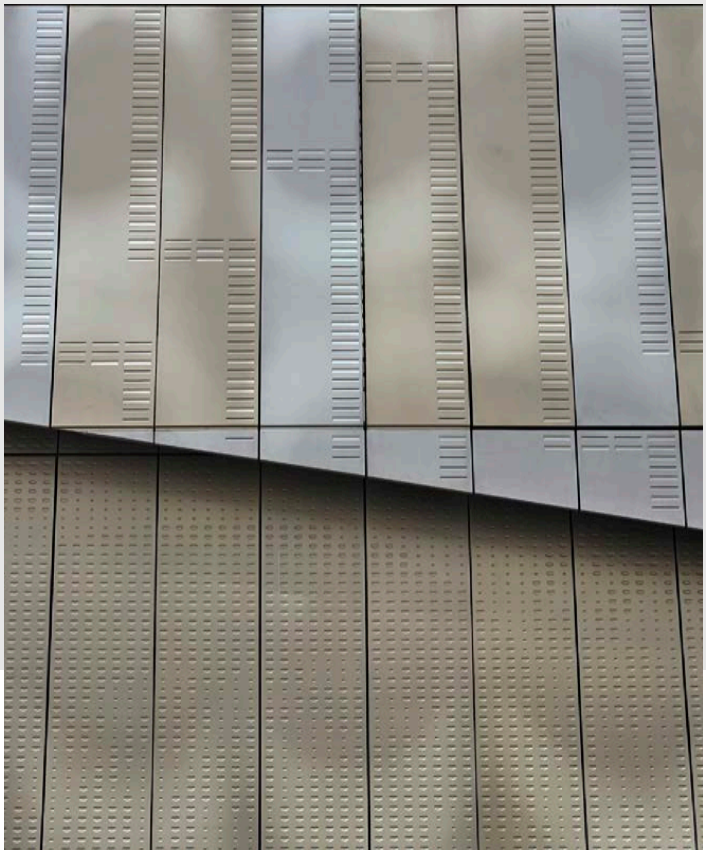


Taranaki Base Hospital Extension - High Performance PW100 unitised curtainwall integrated with Thermoplank unitised rainscreen.

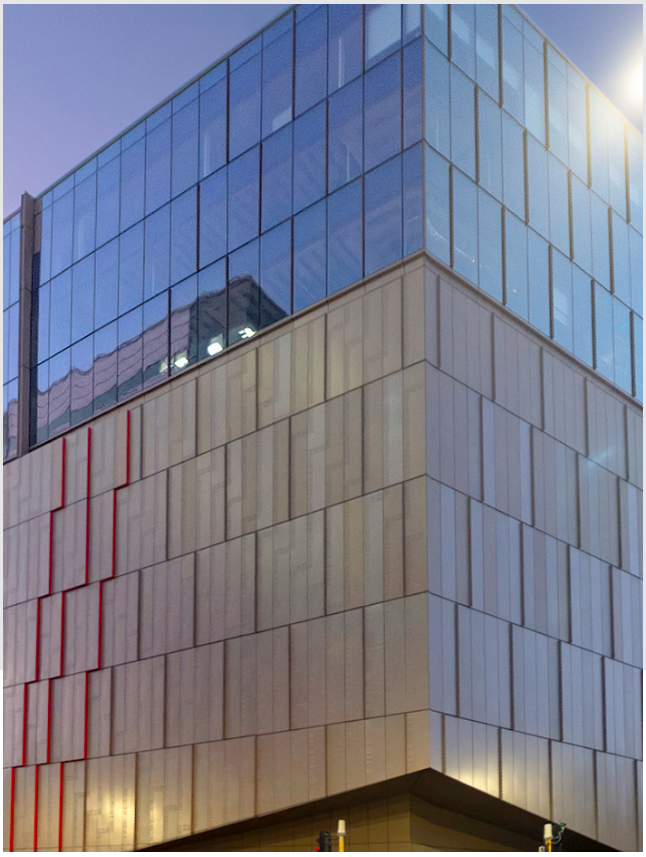
University of Auckland B201 - PW1000 unitised curtainwall integrated with vertical solar shading, and to upper level with Thermoplank.



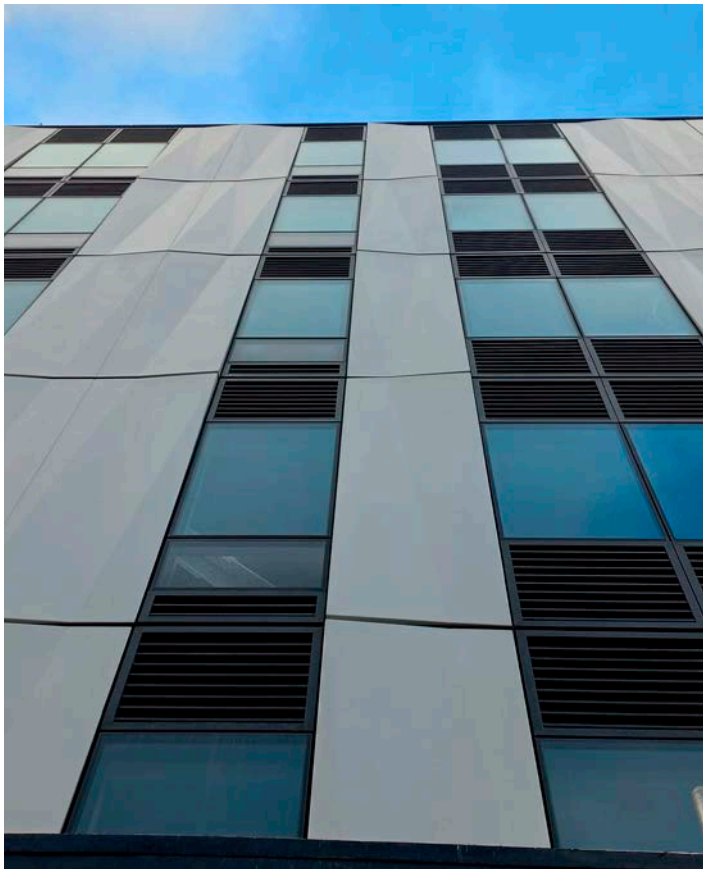
Cordis Hotel, Auckland - PW1000 unitised curtainwall and embossed powdercoated solid aluminium panels to match the original hotel facade.



Detail of the prefabricated unitised embossed aluminium panels installed on National Archives Heke Rua, Wellington.



The National Archives Heke Rua building in Wellington - features a Thermosash PW1000 Thermally Broken unitised curtainwall compliant with BS/EU 16893 - a factor of 10 better air infiltration / ex-filtration that NZS4284 compliance.



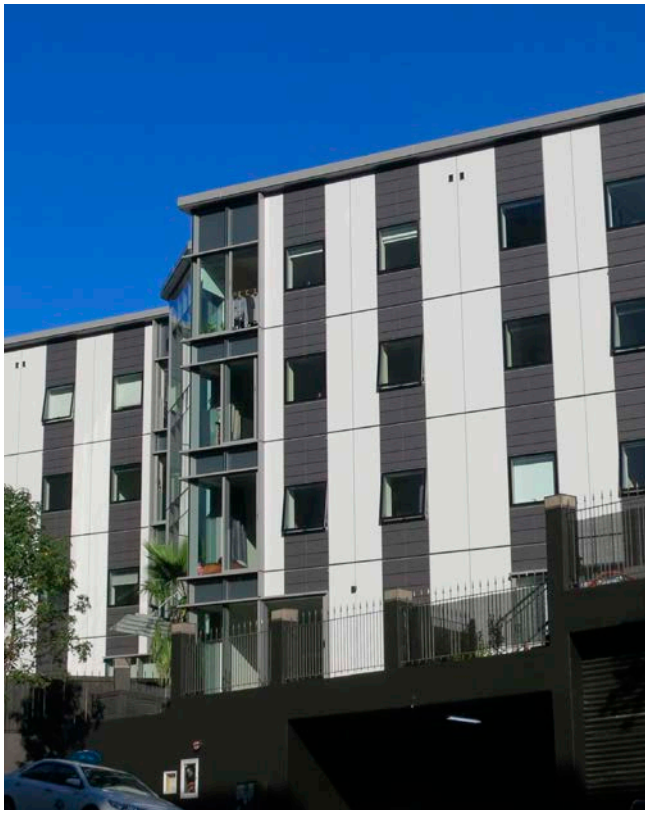
1 Enfield Street Apartments, Auckland - PW1000 integrated with architectural aluminium feature pressings

CAB Apartments, Auckland - unique folded metal cladding designed to match the original heritage fluting.

123 Victoria Street, Christchurch - PW1000 structural curtainwall integrated with horizontal aluminium louvres

UOA School of Science 302 - PW1000 unitised curtainwall integrated with aluminium feature chevrons to upper podium, and incorporating glazed and Zinc clad integrated panels and Zinc clad feature fin projections to upper tower.

Armagh Apartments, Christchurch - PW100 suite integrated with large format porcelain panels.



Columbia Apartments, Auckland - PW1000 suite integrated with terracotta tiles and ACP cladding.

THERMOSASH
CAPABILITY & CAPACITY

Thermosash has experienced engineering, CAD design, QS, procurement, manufacturing, logistics, project & site managers and install teams who collectively through teamwork, shared knowledge, experience and innovation deliver project after project. Our manufacturing facilities in Christchurch, Wellington, Levin and Auckland, as well as our subsidiary Thermosash Group companies; Woods Glass, Insite Façades, WEC and Thermosash Service & Maintenance collectively have c. 650 full time staff This group resource base enables us to machine and assemble on average 17,000 unitised panels per year with our current work force.

Thermosash Levin Factory assembly and glazing lines.

Thermosash Henderson, Auckland CNC machining centre enclosed in a Thermosash PW1000 acoustic curtainwall.

Latter Day Saints, Auckland site installation - PW1000 unitised curtainwall with integrated glazing, aluminium louvre and non-vision panel.

INDEPENDENT TESTING

All the Thermosash suites are independently laboratory tested to IANZ (International Accreditation New Zealand).

Test certificates are available on request.

EARLY INVOLVEMENT ECI

The façade is a critical path trade, we offer value engineering and provide early design inputs and assistance with technical detailing. Forward planning of procurement, manufacturing needs and site installation management will greatly benefit your project.

- We provide value engineering early involvement gives us the opportunity to improve project value through our experience and knowledge of our systems and products, offering you the best outcome.
- We can provide price & scope certainty with early involvement.
- We provide early design inputs and technical assistance saving variation costs
- We have an in-house high risk Producer Statement author which offers a streamlined consent process by providing higher level of detail to Council.
- ECI enables us to do forward planning and material procurement avoiding unnecessary delays
- We provide proactive management of construction risk for critical path trade

BENEFITS OF A THERMOSASH SOLUTION

Thermosash is a New Zealand based business and has been engineering and manufacturing specific design facade solutions across the country since 1973. We deliver solutions using our trusted and proven systems, offering increased value in terms of;

- 50 years of experience and expertise in the facade solutions industry in New Zealand
- ongoing trust within the industry
- high performance solutions
- durability of systems and longevity of product lifespan
- totally integrated service with ECI /ECE - engineering, producer statement generation, full shop drawings, manufacture and installation.
- design and detail to accommodate seismic loads and inter-storey differential movement, as well as wind loads
- Risk mitigation through one provider construction methodology and one warranty.

ISO STANDARDS

At Thermosash, we place paramount importance on ensuring the highest standards in Health and Safety, Environmental, and Quality Management across our operations. In alignment with our commitment to excellence, Thermosash and Woods Glass Auckland facilities have obtained ISO certification in these critical domains.

Thermosash Group has taken a phased approach in this journey of implementing the ISO standards across the other regional facilities as a comprehensive commitment to Quality, Health & Safety and the Environment.

ISO 45001:2018
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

Focused on ensuring a safe and healthy work environment for all our employees, clients, and collaborators.

ISO 14001:2016
ENVIRONMENTAL MANAGEMENT SYSTEM

Emphasizing our dedication to environmentally sustainable practices, minimizing our ecological footprint, and contributing to a greener future

ISO 9001:2016
QUALITY MANAGEMENT SYSTEMS

Ensuring that our processes consistently meet the needs of our clients and stakeholders, reflecting our unwavering commitment to quality.

DEDICATED HEALTH AND SAFETY AND QUALITY MANAGERS

Each Thermosash branch supports its own dedicated Health and Safety and Quality Managers. These professionals are instrumental in the day-to-day implementation, monitoring, and continuous improvement of our Health and Safety, Environmental, and Quality Management systems. Their role is pivotal in ensuring that our operations align seamlessly with the rigorous standards set by the ISO certifications.

As we progress on this journey, we are confident that the implementation of these ISO standards will not only fortify our commitment to excellence but also underscore our responsibility towards the well-being of our employees, the environment, and the quality of our products and services. Our phased approach, exemplifies our meticulous and comprehensive strategy in achieving ISO certification across the entire Thermosash Group.

Telarc. Integrated Systems Certification cert TM

ISO 9001
ISO 14001
ISO 45001

Thermosash in Henderson, Auckland and Woods Glass in Penrose, Auckland have achieved Telarc compliant ISO certifications.

SUSTAINABILITY

SUSTAINABLE MANUFACTURING

Thermosash manufactures all system components in New Zealand, and primarily source materials where available from the New Zealand market. Our precision machinery ensures optimised material usage with 100% of all metal waste products recycled in the factory, saving on-site waste. We recycle 100% uncontaminated soft plastics, timber, cardboard, paper and 99.5% commercial float glass and IGUs.

LOW CARBON ALUMINIUM EXTRUSIONS

Thermosash DecarbAL™ delivers a super low sustainable embodied carbon footprint per kilogram of aluminium. At the heart of Thermosash's sustainability journey is a partnership with a local New Zealand owned remelt facility producing extrusions with 80% recycled content and low carbon virgin material. Our aluminium supplier is audited annually, for up to date carbon figures please contact us.

LOW CARBON GLASS

Thermosash's commitment to sustainability also extends to our glass selection. With access to worldwide low-carbon glass suppliers, we ensure that our projects benefit from environmentally friendly and high performance glazing options, further reducing the carbon footprint

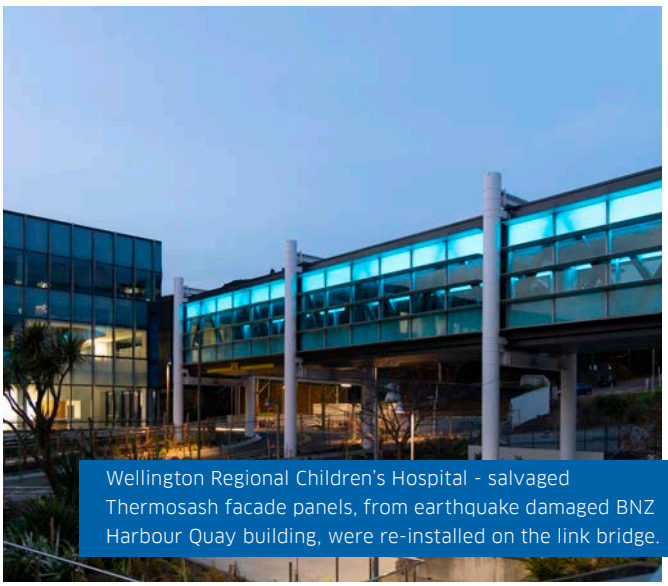
FACADE OPTIMISATION STRATEGIES

To achieve optimised high performance outcomes we offer our clients the option of a Project Sustainability Analysis that covers different aspects of the full sustainability cycle. When specifying our facade systems, clients can engage us to implement one or several of our Facade Optimisation Strategies to achieve their project sustainability goals. To gain the most from our strategies, talk to us early on in the design phase of your project.

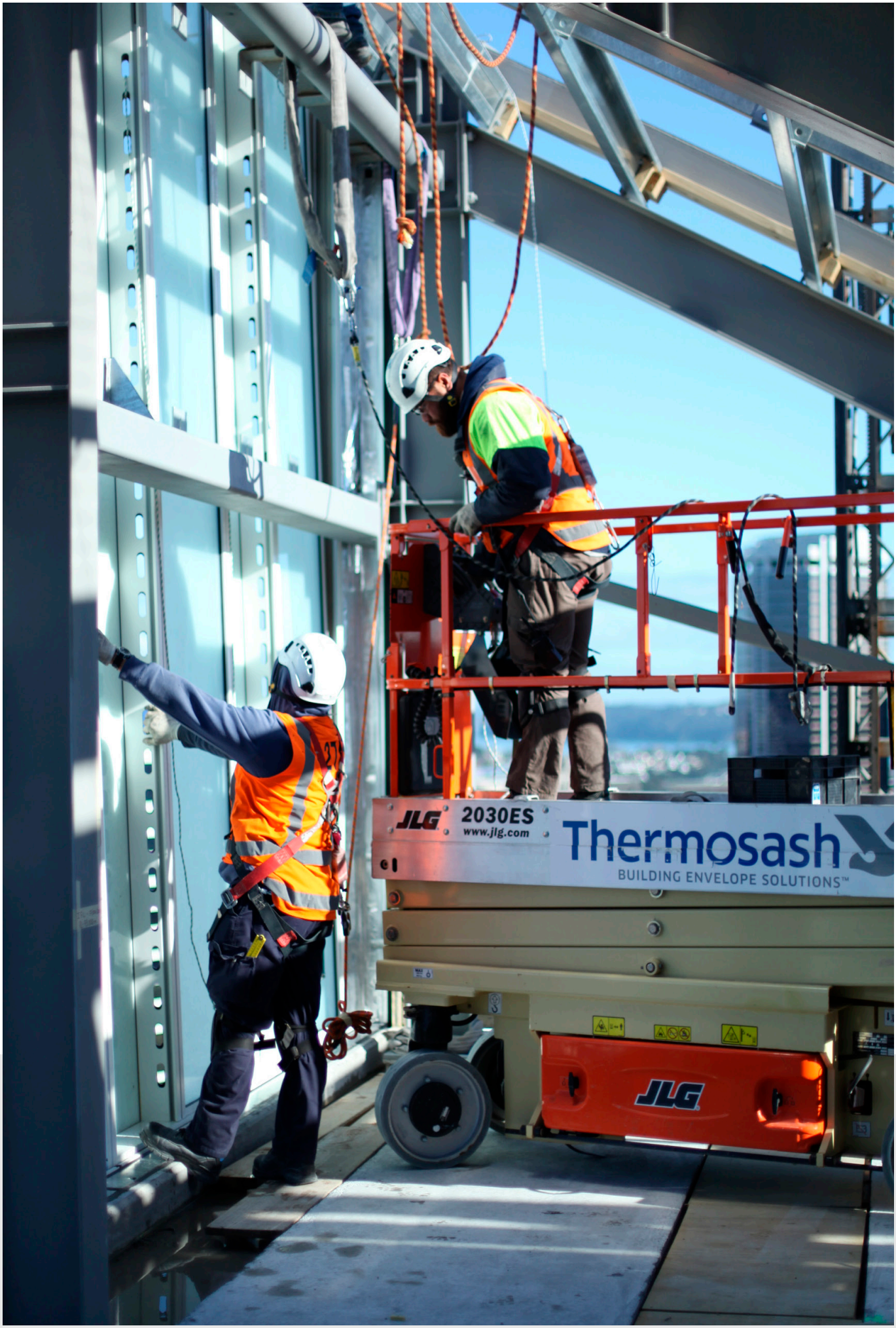
Our Thermosash Sustainability Team can assess and provide analysis reports on embodied and operational carbon engineering optimisation and costs, energy and comfort optimisation and costs, as well as assistance with Green Star credits - these strategies help to guide material selection, shape a more efficient design and provide clarity on ROI payback periods.

REDUCTION OF OPERATIONAL EMISSIONS

Through a full measurement and target reductions audit undertaken by Toitū Envirocare, Thermosash Commercial Ltd achieved Carbonreduce Certification. This provides a baseline for subsequent emission reduction targets going forwards. Please contact us for up to date certification figures.



Wellington Regional Children's Hospital - salvaged Thermosash facade panels, from earthquake damaged BNZ Harbour Quay building, were re-installed on the link bridge.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Thermosash are members of:

NZGBC
TE KAUNIHERA HANGANGA TAUTAIAO

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