
INSOL®
CANOPY COLLECTION

"The difference the right canopy makes can be measured in foot traffic.

A pedestrian friendly frontage that's aesthetically enticing and provides shelter from the elements, draws people in.

Our canopies are designed to do just that. They add to the visual identity of the building and begin the entry sequence, guiding you inside and developing those crucial first impressions."

Greg Simmons, CEO

Pedestrian friendly frontages

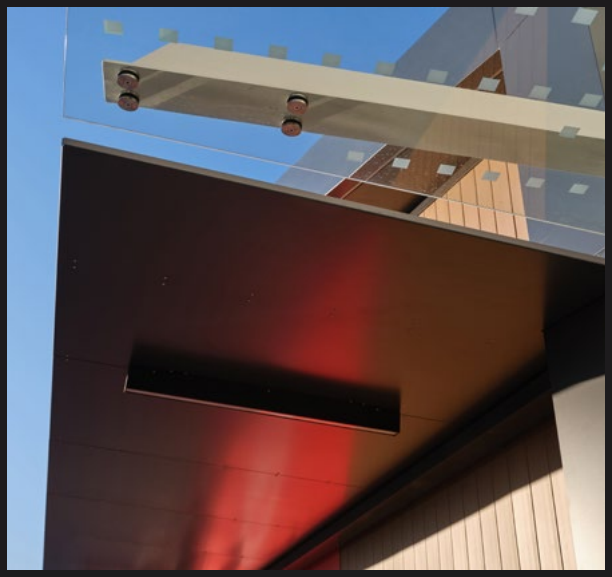
Pedestrian friendly areas are characterised by the need to maximize the ease and comfort of the walking experience. They must have good 'walkability' if the built environment is considered to be walking friendly.

Research shows people don't walk where there is poor quality lighting, a lack of shade and/or a lack of shelter from inclement weather. Canopies help overcome each of these objections. Where local Councils have designated Pedestrian Friendly Zones, canopies are usually subject to design considerations within the rules for Pedestrian Friendly Frontages.

Our canopies will help businesses (and Councils) meet the guidelines and goals set. They can provide continuous weather protection and form the essential link from location to location.

We have designed canopies which create both aesthetic and social benefits, creating the best possible conditions for pedestrian freedom of movement. They provide an economic boost to shopping areas, with studies showing a pedestrian first design improves retail performance and competitiveness.

6 Carr Road, Mt Roskill, Auckland | Equinox Canopy System



Specifications

Insol Canopies are available as standard, customisable or can be designed to match architectural intent. Tested and proven, that are favoured by leading architects and builders.

We know that compliance is non-negotiable and that you need to feel confident in your decision making.

Insol offers a wealth of resources including Masterspec branded work sections, 2D & 3D CAD files as well as Revit BIM tools.

Process

A proprietary approach to canopy design and development has led to the development of the pre-engineered Equinox Canopies range.

Adding to the simplicity is our unique approach, bringing canopy construction under one roof and removing the complication of on-site interdependencies and the number of contractors on-site. The Equinox Canopies range includes multiple connection options and can incorporate PET (Polyethylene terephthalate), glass and integrated lighting for night-time illumination.

Engineering canopies to withstand upward and downward forces is critical, as the loads generated by wind and snow on a canopy can be significant.

Producer Statements (stamped plans) are available for all standard Insol canopy designs and we can provide full engineering services for custom canopies.

We also have our own wind tunnel available to physically test 1:1 scale mock-ups for projects that demand advanced risk mitigation.

Finishes

Since most components are durable aluminium, standard canopies are finished in a durable powdercoat.

This meets durability requirements and provides building owners with a durable and easy to maintain canopy that will withstand the elements for many years.

The Insol Wind Tunnel

With the ability to generate a constant wind speed of up to 200 km/h (124 mph), the Wind Tunnel at the Insol Facade Testing Laboratory is unique in the Southern Hemisphere.

Louvre profiles, connection details, and assemblies can be tested at full scale. Wind related issues such as wind noise and aero-elastic flutter can be ironed out in the process. Performance and behavior of dynamic elements such as sliding or bi-folding screens can be determined in a safe environment.

This testing is unique to Insol.

For more information about the Wind Tunnel, please refer to our website or scanning the QR code below.

insolarchitectural.com/windlab

WindLab™

EQUINOX™ canopy

The EQUINOX™ canopy system is a pre-engineered and modular canopy system and accompanying bracketry.

The canopy features cantilevered outrigger brackets with solid aluminium infill panels, and integrated gutter and flashing.

These features provide versatility, ease of installation, weather protection, flexible size options and an architecturally pleasing aesthetic.

Further architectural features can be added, for example, including glass infills, feature fascia panels or integrated signage and lighting.

Farmlands Hastings | Equinox Canopy

Cross section and dims, span table

The Equinox Canopy system ensure that pedestrians, employees and visitors are protected from the elements.

By using a pre-engineered system, you will benefit from the expertise of our technical team, who can advise on potential risks and recommend the best configuration for your project.

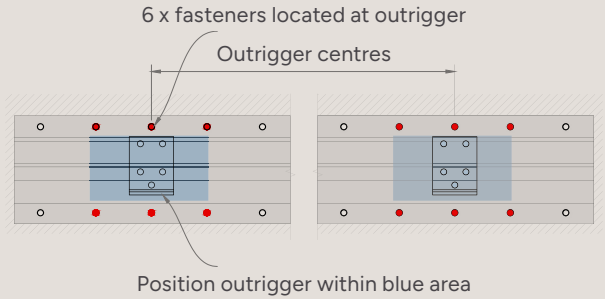
- Spanning capabilities of up to 2.8m (or more, depending on configuration and location).
- Integrated gutter and downpipe droppers.
- Easy compliance with standard detailing and PS1 (producer statements or stamped plans).
- Fully aluminum construction for durability.
- Compatible with a range of power coat or anodised finishes.
- Custom options available.

Diagram showing definition of canopy cantilever

Canopy cantilever (m)

Structure anchor arrangement requirements

Please refer to the Insol Technical Data Sheet for approved fixing types.



Maximum permissible canopy cantilever (m)

	Wind zones					Snow zones	
Outrigger centres m	**Low** v=32m/s	**Medium** v=37m/s	**High** v=44m/s	**Very high** v=50m/s	**Extra high** v=55m/s	**N4** h=100m	**N5** h=200m
0.6	3.20	2.80	2.50	2.20	2.00	1.80	1.80
1.2	2.20	2.00	1.70	1.60	1.40	1.20	1.20

Modules / cladding types

The Equinox canopy is designed to be fixed outside the weather line, with only bolt fixings penetrating this.

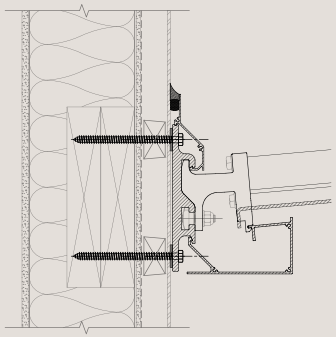
We have provided a range of typical details, however most projects require some form of custom designed detailing and coordination with the cladding designs.

Building regulation authorities normally ask that custom designed support structured and details are signed off by a registered engineer with a producer statement (PS1).

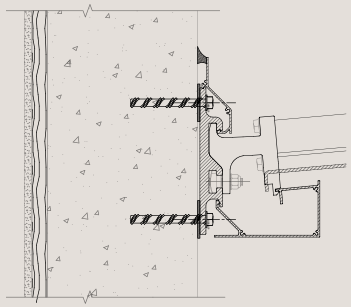
Our solutions are supported with in-house capabilities.

We can offer Early Contractor Involvement (or Design-Assist) on large or complex projects, providing assurance that canopy or louvre systems are properly designed and integrated.

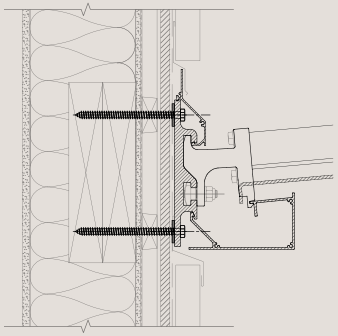
ACM cladding



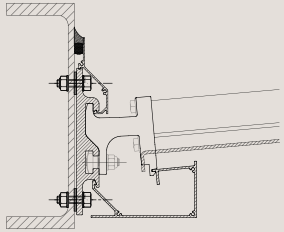
Solid concrete



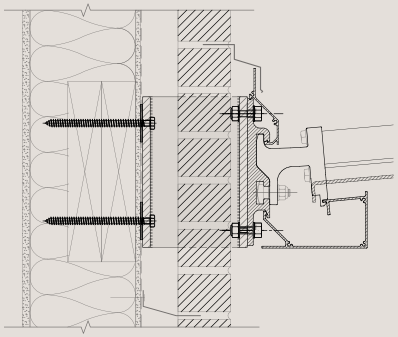
Profile metal cladding — vertical



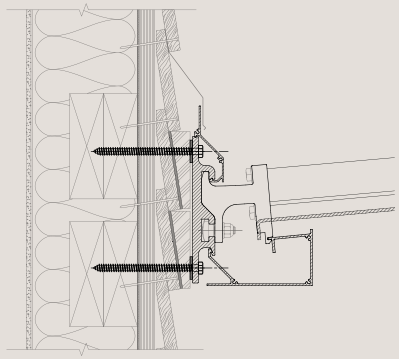
Steel structure



Brick veneer



Weatherboard



Tie rods to improve projection

Tie rods are a simple addition to the canopy system. They can be used simply to provide a different aesthetic, or as a way to increase the cantilever of the system, particularly in high snow or wind loading areas.

Tie rods are normally 12-16mm diameter S/S with a turnbuckle end for adjustment. Custom engineering is required for projects where tie rods are added.

Facia to increase depth

Fascias and soffits from a variety of materials can be added to the canopy system to achieve different aesthetics. With these additions there is also more scope for lighting and signage attachments.

Due to the additional dead loads, project specific engineering is required for these options.

Glazed option

The standard Equinox canopy material is 4mm aluminium with a 30mm up-stand on the front edge for stiffness.

However, a range of other materials can be used such as glass to allow more light through. Different canopy materials add different dead loads to the system and are subject to project specific engineering. Insol is able to include glazing specifications with project specific engineering.

HORIZON™ canopy

The HORIZON™ canopy system is a range of simple folded sheet metal canopies and accompanying bracketry designed with economy in mind.

The standard pre-engineered design allows a 1.2m (4ft) canopy with tie rods (included in the design).

The sections can be bolted together to provide a longer canopy if required.

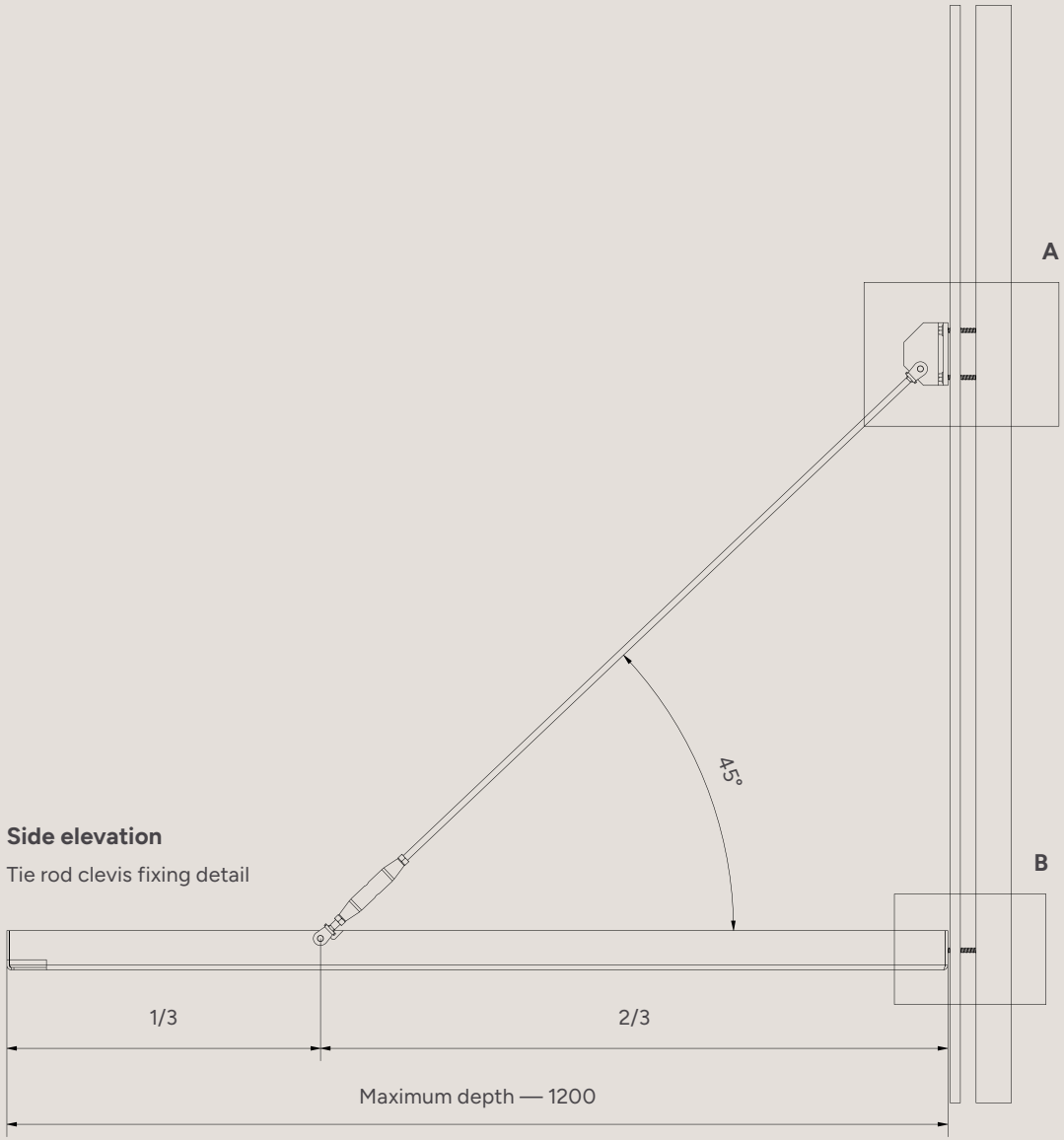
Evergreen Cafe, Manukau, Auckland | Horizon Canopy

Cross section and dims

The Horizon Canopy system ensures that pedestrians, employees and visitors are protected from the elements.

By using a pre-engineered system, you will benefit from the expertise of our technical team, who can advise on potential risks and recommend the best configuration for your project.

- Lower cost alternative to the Equinox system.
- Spanning capabilities of up to 1.5m.
- Requires tie rod support (supplied with canopy as standard).
- Easy compliance with standard detailing and producer statement (PS1) or stamped plans.
- Fully Aluminum construction for durability.
- Compatible with a range of power coat or anodised finishes.
- Custom options available.



Side elevation

Tie rod clevis fixing detail

Modules / cladding types

The Horizon canopy is designed to be fixed outside the weather line, with only bolt fixings penetrating this.

We have provided a range of typical details, however most projects require some form of custom designed detailing and coordination with the cladding designs.

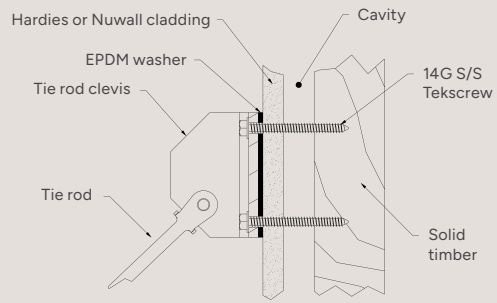
Building regulation authorities normally ask that custom designed support structured and details are signed off by a registered engineer with a producer statement (PS1).

Our solutions are supported with in house capabilities.

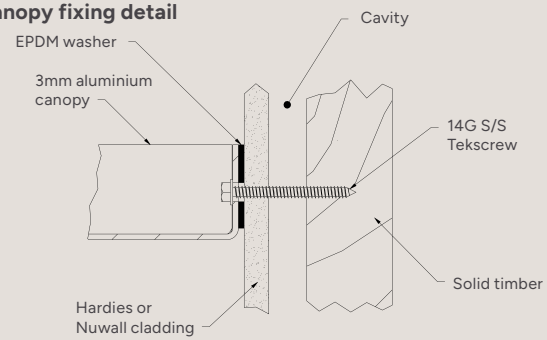
We can offer Early Contractor Involvement (or Design-Assist) on large or complex projects, providing assurance that canopy or louvre systems are properly designed and integrated.

Monolithic cladding

Tie rod clevis fixing detail

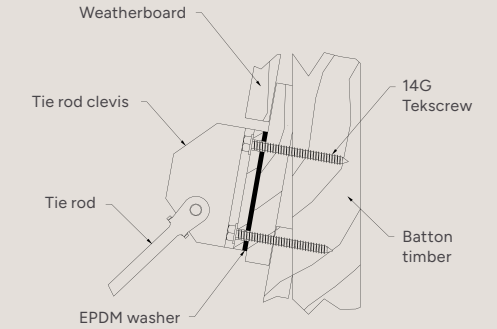


Canopy fixing detail

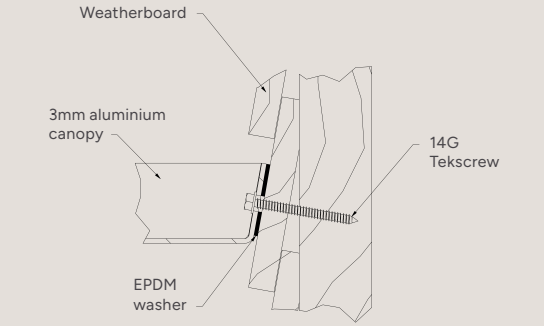


Weatherboard cladding

Tie rod clevis fixing detail

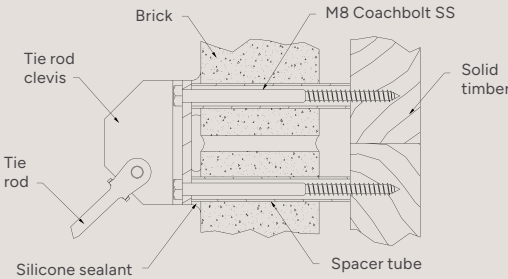


Canopy fixing detail

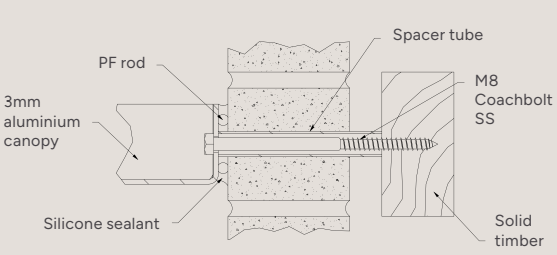


Brick cladding

Tie rod clevis fixing detail

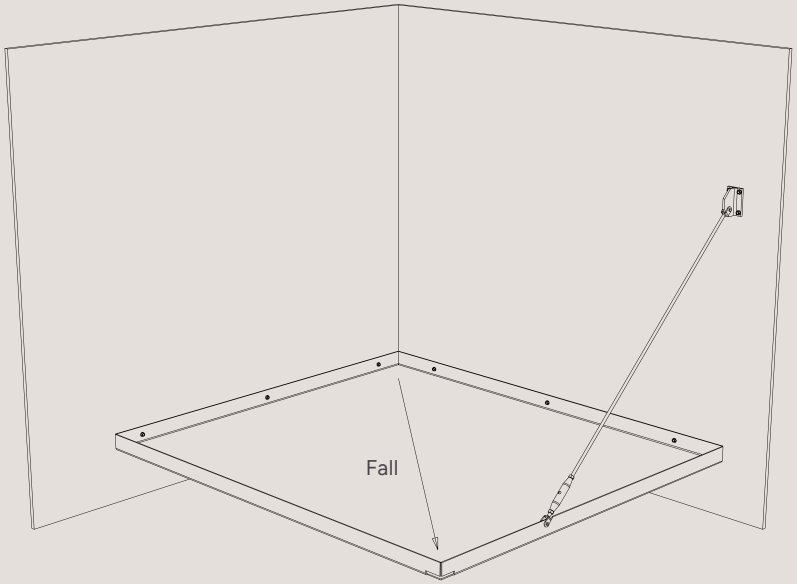


Canopy to brick fixing detail

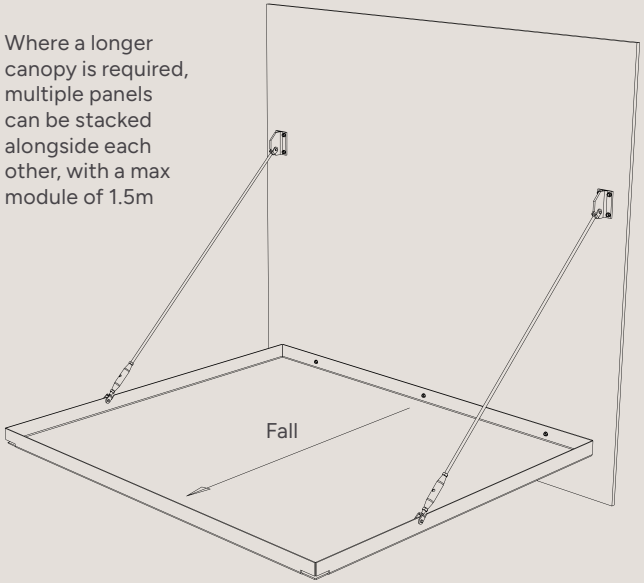


Span table

Horizon Canopy Sections can be added alongside of each other to create a longer canopy if required.



Where a longer canopy is required, multiple panels can be stacked alongside each other, with a max module of 1.5m



Custom canopies

Insol specialises in design solutions for complex projects with demanding architectural detail and construction methodology.

Our combination of experience and expertise in design, engineering, manufacturing, and construction management makes us uniquely placed to bring visions to fruition.

Custom canopy designs often include designs in sheet metal, aluminium extrusion, steel, metal grating, mesh and timber.

Ngāmotu House, New Plymouth

Example cross section

Some applications call for a specific design to meet project requirements:

- Aesthetics
- Set out
- Cladding types
- Spanning capabilities

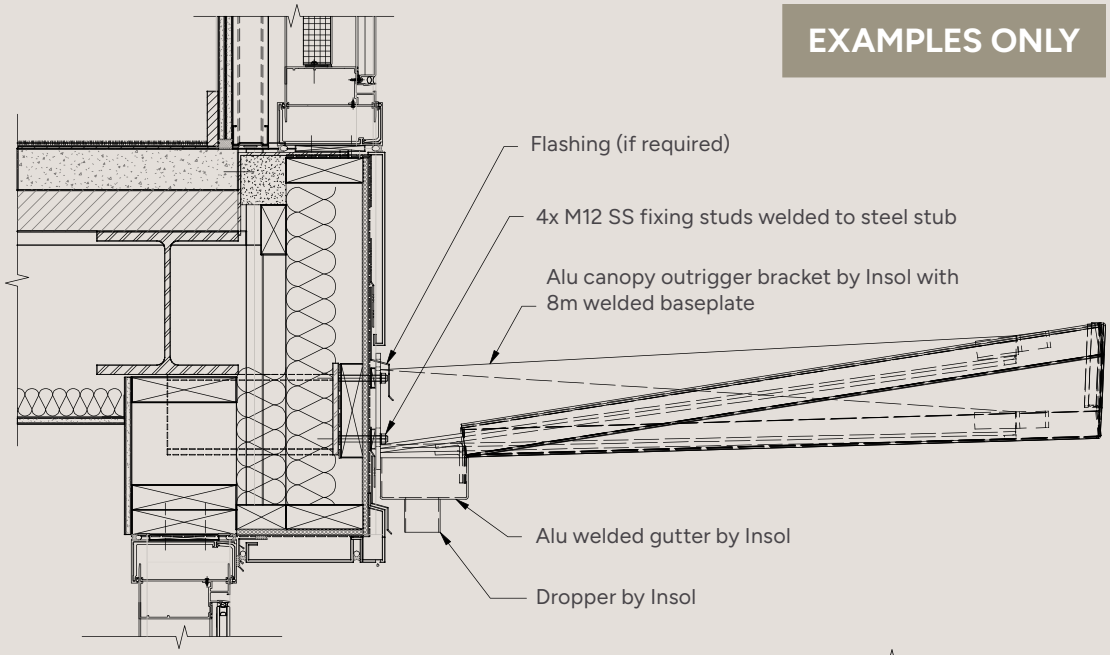
Insol is able to design custom canopies to meet most project requirements.

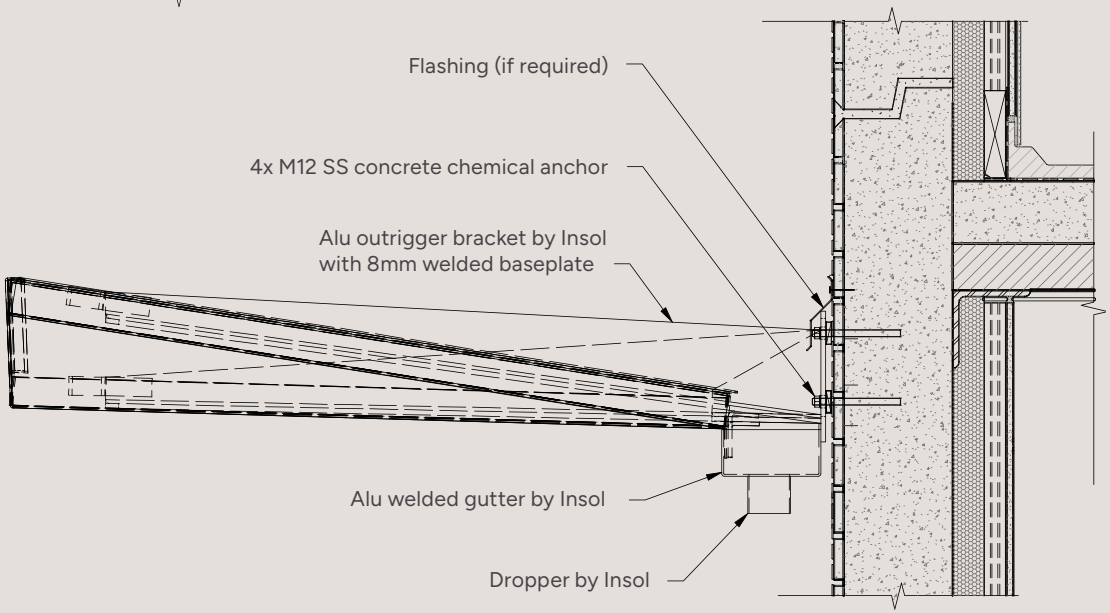
Building regulation authorities normally ask that custom designed support structured and details are signed off by a registered engineer with a producer statement (PS1).

Our solutions are supported with in house capabilities. We can offer Early Contractor Involvement (or Design-Assist) on large or complex projects, providing assurance that canopy or louvre systems are properly designed and integrated.

Detail 1: Typical metal clad wall fixing

EXAMPLES ONLY





Detail 2: Typical pre-cast wall fixing

CASE STUDIES

Whenuapai Childcare Centre

Client
New Shoots

Location
Whenuapai, Auckland

Architect
Copeland Associates

New Shoots Children's Centres use environmentally friendly designs, an approach which extends through to the children's resources, which are ethically sourced.

The design by Copeland Associates features the striking use of natural wood throughout, adding a relaxing warmth which no doubt helps settle the young minds occupying the building and grounds. Purposely included in the design, with its infinite recyclability appealing, is a series of aluminium canopies. They provide a sheltered walkway around parts of the exterior and allow for the sliding doors to flood the interior with revitalising fresh air, without flooding the interior with water on those warm but wet days.

6 Carr Road

Location
Mt Roskill, Auckland

Architect
RCG

Contractor
Macrennie Commercial Construction

6 Carr Road enjoys impressive road frontage and easy access via the nearby State Highway. The new retail area, including big brand stores along with food outlets, was designed to provide Mt Roskill residents with easily accessible amenities that are considerably closer than the shopping centres at New Lynn or St Lukes.

Such a refurbishment is perfectly suited to Insol's new Equinox Canopy System. Designed to be the most architect friendly canopy solution available, it removes the need for multiple subcontractors and complicated installation sequencing, acting as a single solution canopy option that can include glazing, lighting, signage and other customisable options.

At 6 Carr Road, the design included 4mm aluminium canopies, 2m deep, with strengthened laminated glass canopies at each end. Integrated lighting and signage adds to the retail branding opportunity and extends a warm welcome to customers after dark.


bed bath & beyond
HOME STORE
ENTRY
FREE
BIG
BRANDS
BIG
SAVINGS
UP TO
50%
10%


bed bath & beyond
HOME
STORE

Paisly Place

Location
Auckland

Architect
T-Plus Architects

Contractor
Lanta Construction

This canopy looks highly customised, however it is underpinned by a relatively simple design.

The structure, integrated gutter and canopy panels are provided by a standard Equinox canopy.

However, adding a 200mm high facia and soffit panels in the same custom powder coat colour enhances the look, and weather protection the canopy is providing.

Farmlands Hastings

Location
Hastings

Client
Farmlands

Contractor
Axiom Projects

When tasked with the job of repurposing of an existing warehouse building to a new retail centre for Farmlands Hastings, the obvious solution for the canopy was a pre-engineered Equinox canopy, powdercoated in the brand colours.

The new store has been designed with farmers and growers in mind, offering improved retail facilities, a drive-thru and it sits right next to the Farmlands Horticulture Hub – that's one location for all your rural needs.

Farmlands has been part of the Hawke's Bay for six decades, and we were excited to help them continue that legacy in this modern space – one that looks to the future while honouring our past.

Evergreen Cafe

Location
Auckland

Architect
Woodhems Meikle Zhan Architects

Contractor
Capri Construction

With stunning views across the Manukau harbor and inlet, the new Evergreen Cafe is a great place to stop and take in the views. While studying the said views, you may not appreciate the slick Horizon Canopy and opening roofs, which also double as protection from passing spring showers while collecting your morning pick me up.

The preengineered canopy made life a breeze for Capri Construction, who were able to complete the cladding prior to installation of the canopy panels. It is supported with tie rods, and finished with a durable Dulux Duratec powdercoat, suitable for the coastal location.


Evergreen
CAFÉ
OPEN G SOON

Risland Albany Apartments

Location
Albany, Auckland

Architect
Leuschke Group Architects

Contractor
CMP Construction

With the three blocks creating a vertical village, all gathered around the central landscaped courtyard, Risland Albany is an apartment complex of attractive simplicity. The architect's vision used a refined palette, pairing different textures to achieve a warming contrast. Rough concrete, painted brick and grooved timber panelling, combine with a dark bronze for a contemporary feel.

The canopies are customised from the Azimuth range and made from 4mm folded aluminium, finished in a Duratec powdercoat finish. Attachment is via support brackets to the primary structure. Any water drains to the gutter at the back of the canopy.

AgResearch

Location
Christchurch

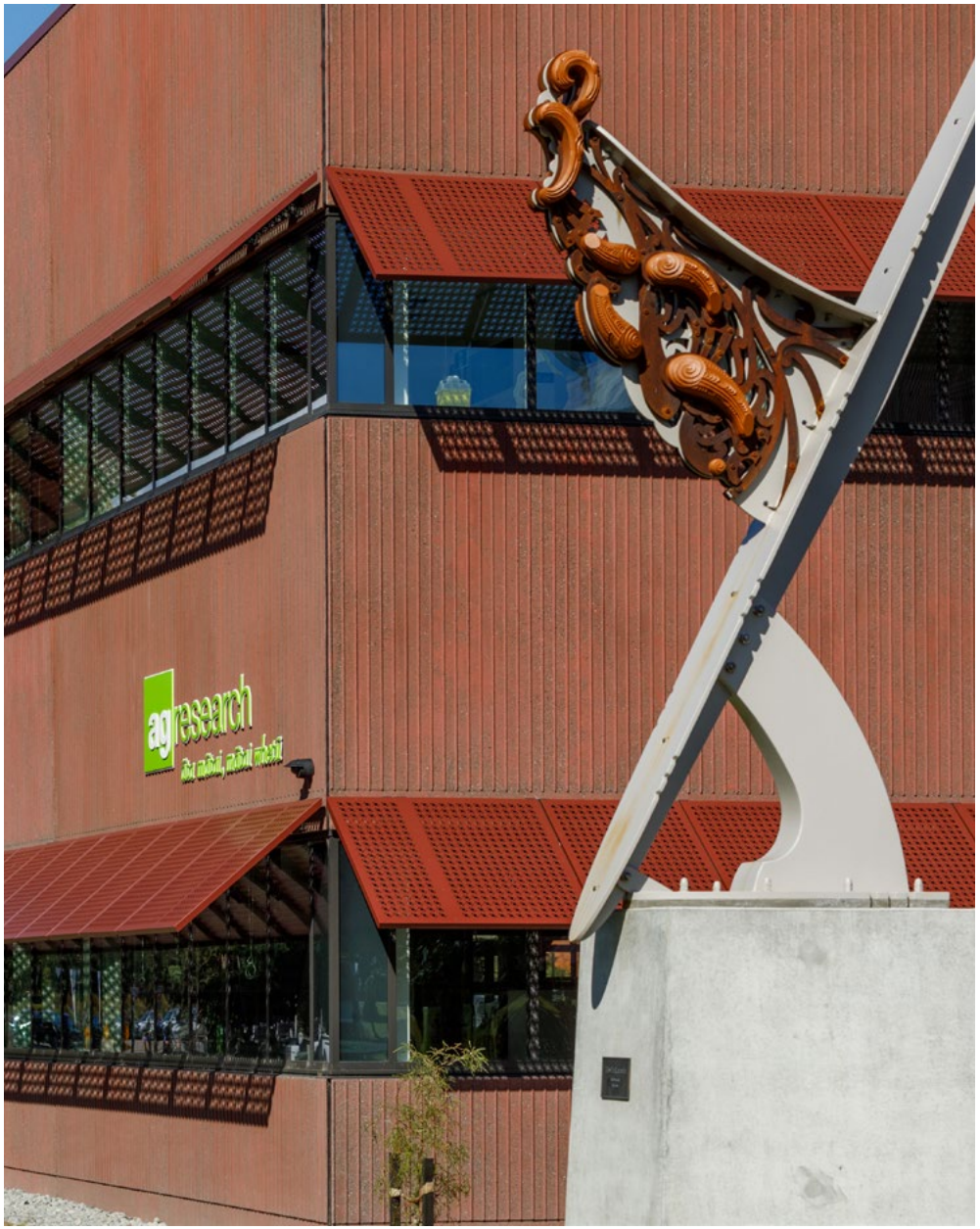
Architect
Architectus

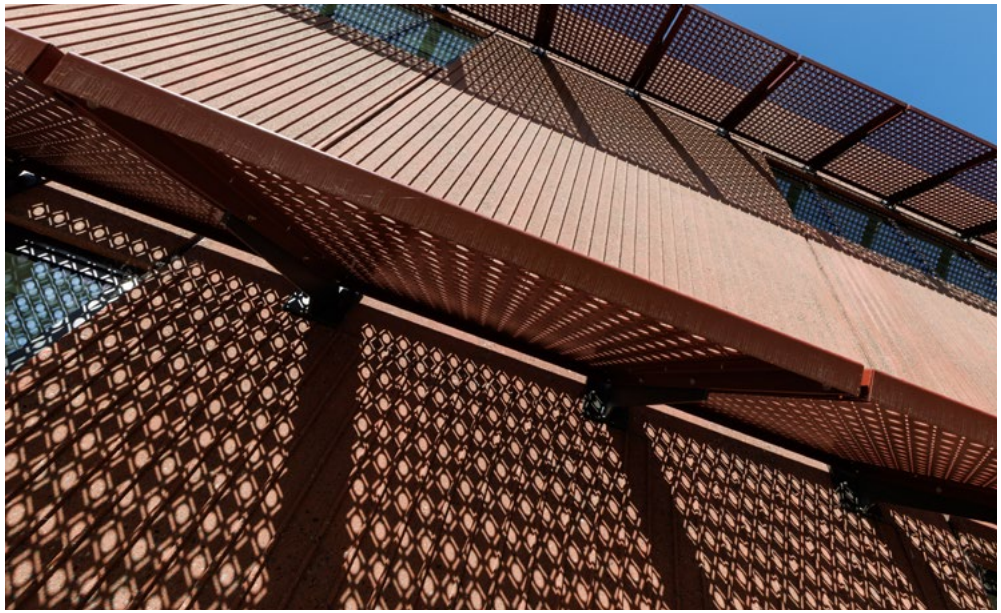
Contractor
Naylor Love Construction

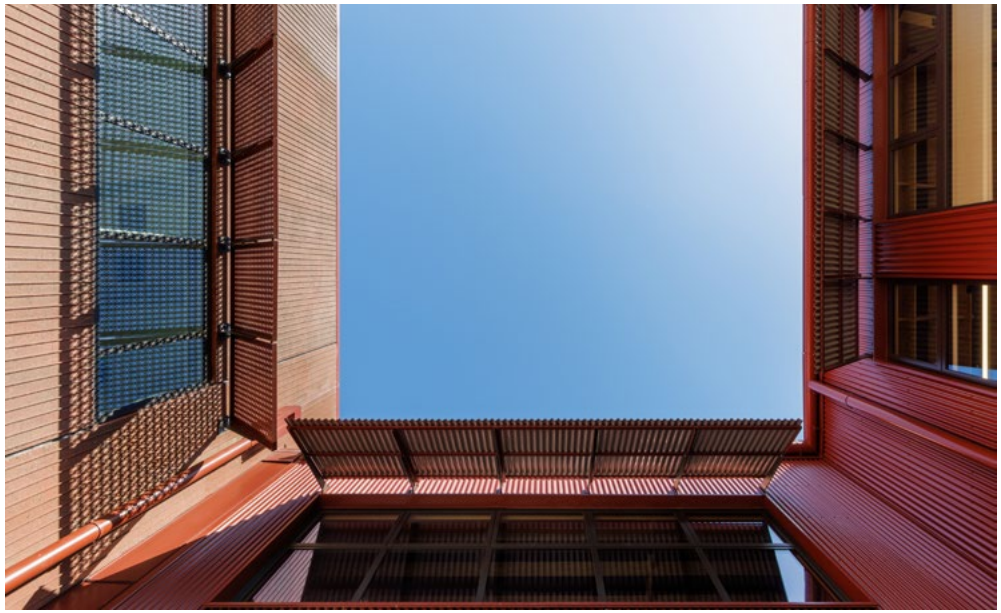
Agresearch's new $103 million science facility is home to the 300 scientists and support staff tasked with leading agricultural science and innovation. The design is a nostalgic nod to the classic farm building, finished in the old red farm corrugated iron colouring that is instantly recognisable and symbolic of the rural heartland.

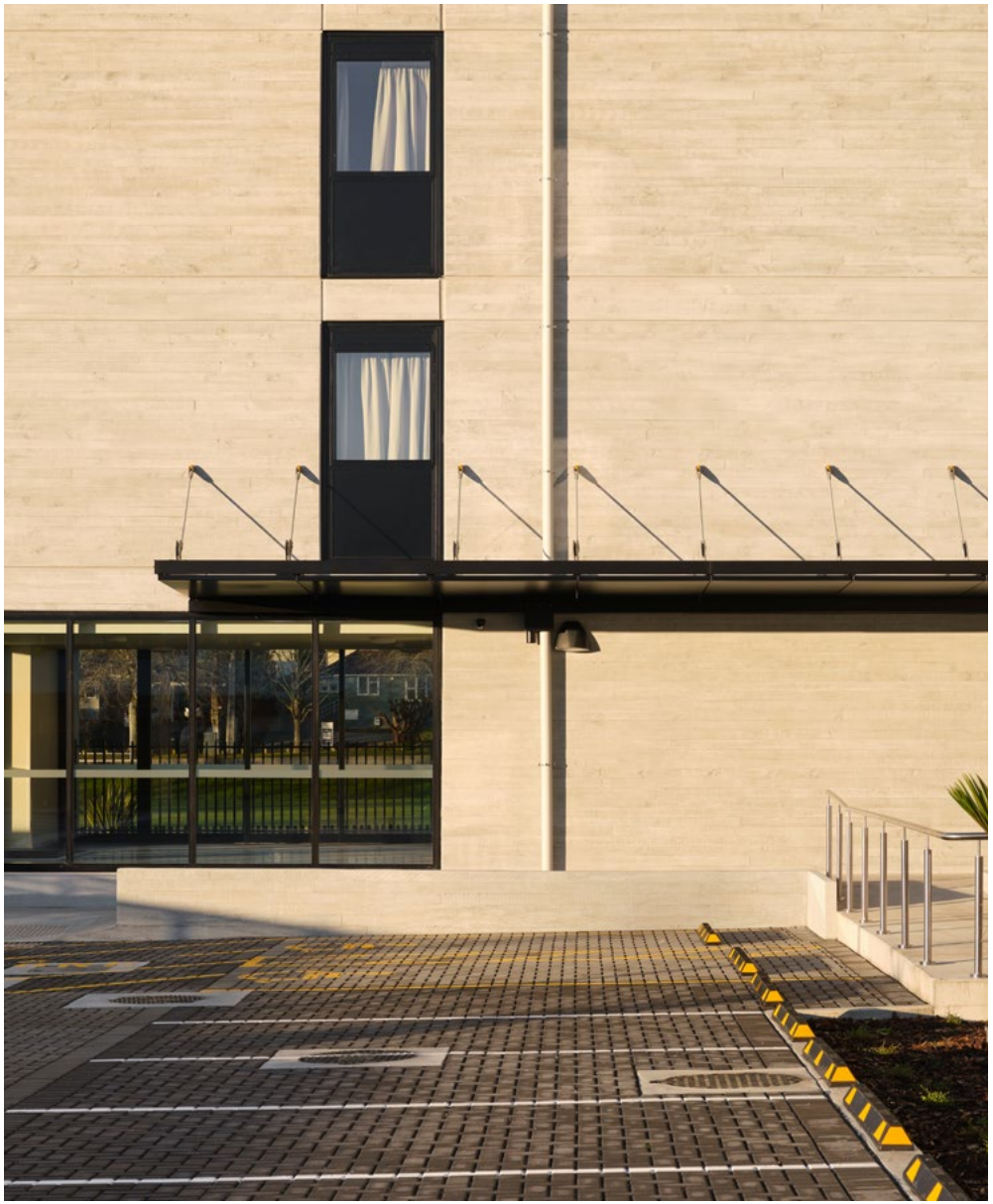
Two different sunshades were to be used, both providing the required shading for the glazing which runs around much of the structure at ground level and on the first floor. Where the strips of glazing consist of two levels with the top being openable, the sun shading extends down to the bottom of that window to ensure it is shaded at all times.

The finished structure uses just 22% of the embodied carbon vs a traditional building, along with a reduction in the operational carbon burden expected thanks to effective sun shading.


agresearch

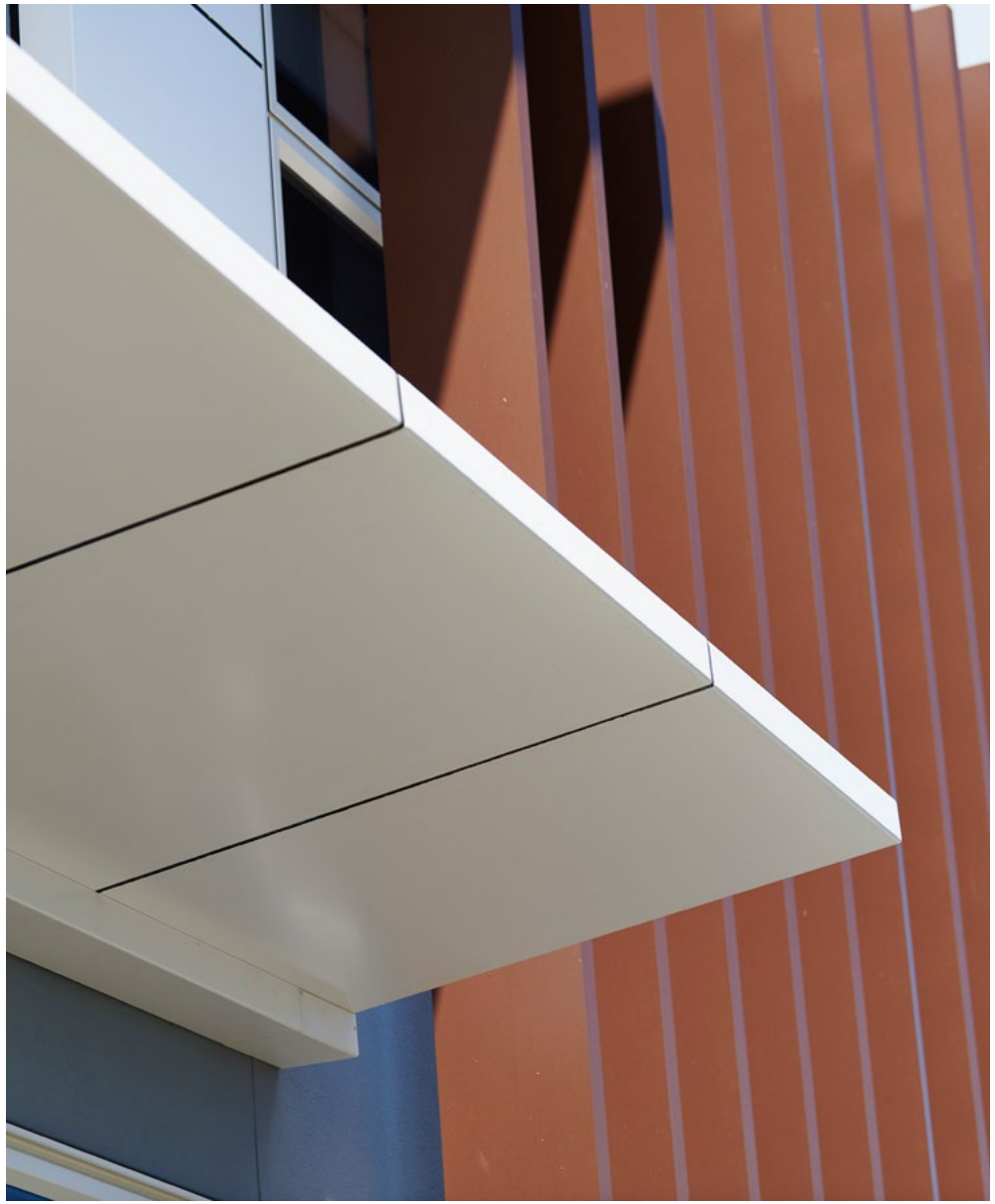






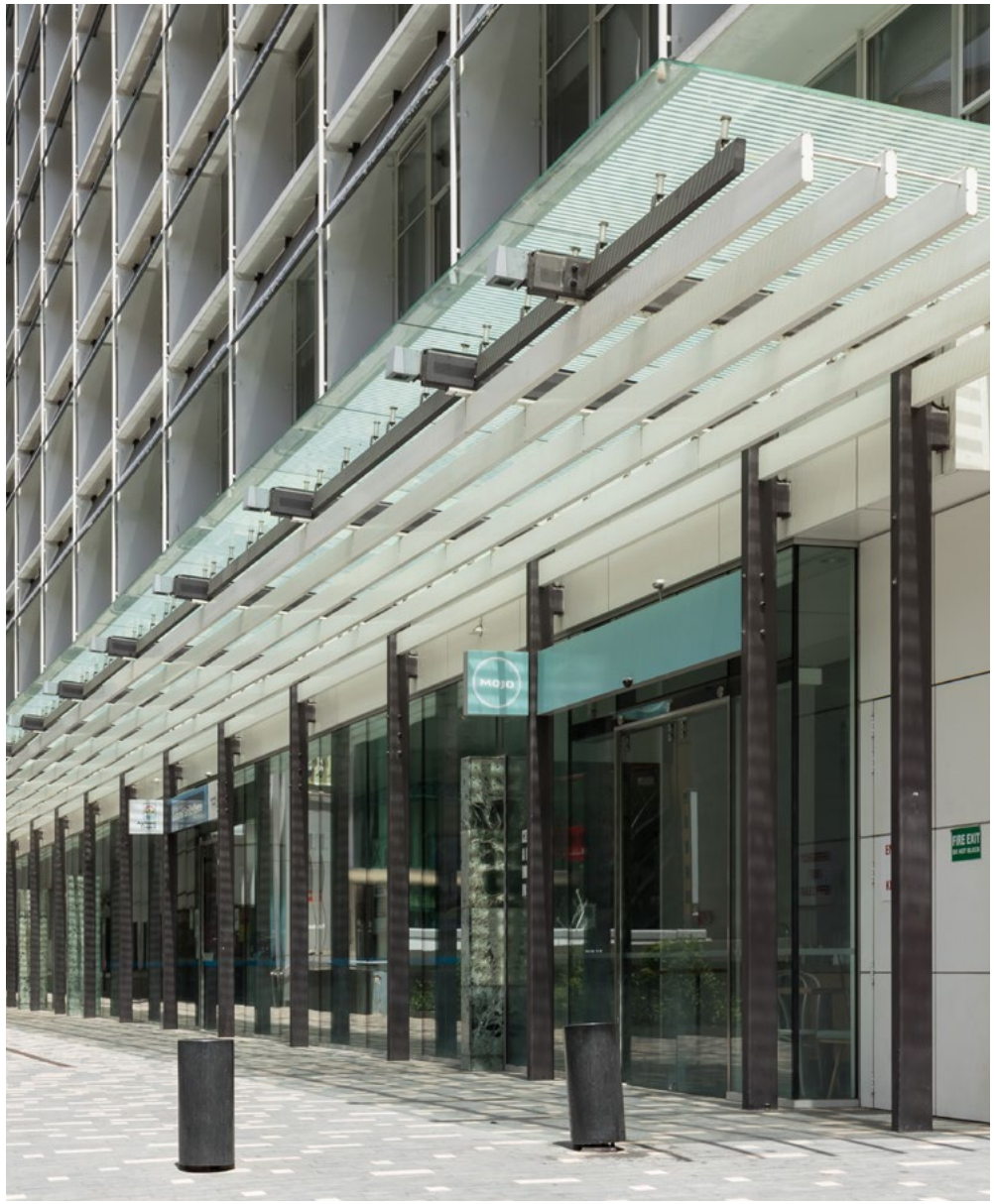
KO Greenslade, Auckland | Custom Canopy

University of Canterbury Engineering Precinct, Christchurch | Custom Window Shrouds



Strata Views, Tauranga | Horizon Canopy

Cadman Avenue, Auckland | Horizon Canopy



Bledisloe House, Auckland CBD | Solaris Louvre Canopy

Trimmer Terrace, Auckland | Horizon Canopy

See also: Insol louvres and Dapple screening

Our robust and reliable louvre products can enhance and define the character of any building. The comprehensive ranges are designed with features that provide versatility, shading, screening, size options, and unique architectural statements.

Dapple is an extraordinary range of perforated sheet metal. Thoughtfully designed, each pattern showcases a choreography of light, performed by deep shadows and dancing sunlight.
The effect is entrancing
and ever-changing.

For more information about our these ranges, please refer to our separate catalogue on our website or by scanning the QR code below.

insol.co.nz/resources/downloads

dapple BY INSOL

Te Ara Ātea Library & Community Center, Canterbury | Custom Rainscreen Louvre Profile

CANOPY COLLECTION

Architecturally designed, pedestrian-friendly canopy solutions, pre-engineered using a proprietary system to meet architectural intent and simplify installation

34 Onslow Street, Invercargill
03 216 3287 | enquiries@insol.co.nz

INSOL®

7 Waokauri Place, Auckland
09 276 9735 | enquiries@insol.co.nz