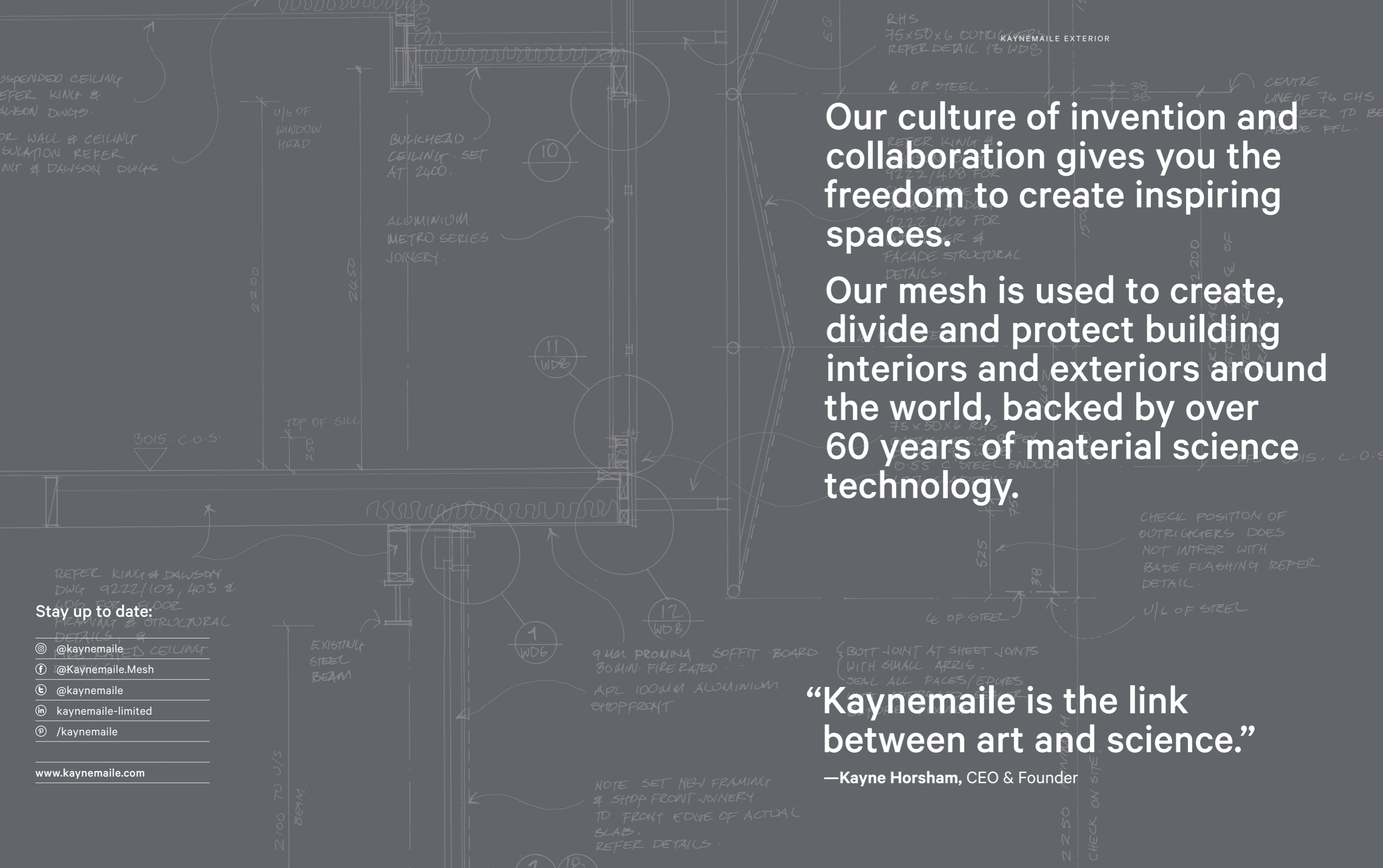


Kaynemaile for Exteriors





Solar screening for retail store | Wellington, New Zealand.
See full case study online at www.kaynemaile.com/cs-hutt-road



Our culture of invention and collaboration gives you the freedom to create inspiring spaces.

Our mesh is used to create, divide and protect building interiors and exteriors around the world, backed by over 60 years of material science technology.

“Kaynemaile is the link between art and science.”

—Kayne Horsham, CEO & Founder

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www.kaynemaile.com

Functional and Beautiful

We reimagined two-thousand-year-old chain mail armour into a unique architectural mesh called Kaynemaile—made using our own patented, award-winning technology.

Kaynemaile is lightweight and goes up fast, cutting construction timeframes and labour costs as a result.

Manufactured from high grade polycarbonate, Kaynemaile's unique properties reduce solar heat gain into the building envelope by up to 70% without losing visual transparency. We can make our screens to any height or width without joins—we are the only manufacturer in the world that can do this.

Enagua at Playa Vista, Los Angeles, USA | Photography by Fred L'Ami



Photography by Jason Mann

KAYNEMAILE EXTERIOR

Vibrant Weather Protection

PROJECT

Atrium Screening,
The University of Auckland

DESIGN

Architectus

LOCATION

Auckland, New Zealand

Kaynemaile is used to connect two adjacent buildings in the atrium of this busy inner city campus.



Installed as seamless screens Kaynemaile transforms a previously underused space into a vibrant and sheltered meeting area.

Spanning up to three floors these bright coloured screens give protection from the wind, rain and sun, creating a breathable indoor-outdoor space.



↑ ABOVE & RIGHT: Double layer Kaynemaile screens create a weather resistant, breathable space.

→ FAR RIGHT & OVER: Kaynemaile's vibrant green colour contrasts with the surrounding structure.







KAYNEMAILE EXTERIOR

Geometric Shading

PROJECT

Carousel Shopping Centre
Parking Garage

DESIGN

Scentre Group

LOCATION

Perth, Australia

Kaynemaile worked with Scentre Group Design to develop the exterior screening of the multi-level parking garage. The three-dimensional design is made up of a series of projecting pyramids which are stretched across a steel sub-frame.

Kaynemaile worked with Scentre Group Design to develop the exterior screening of the Westfield Carousel multi-level parking garage in Perth, Australia. The three-dimensional design is made up of a series of projecting pyramids which are stretched across a steel sub-frame. The design covers all four sides of the large parking garage building with a total surface area of 650sqm.

The Bronze Kaynemaile mesh was an ideal choice for this project as it glistens in the sun creating a dynamic, shimmering effect. Installation was fast given the scale of the job thanks to our simple fixing systems.

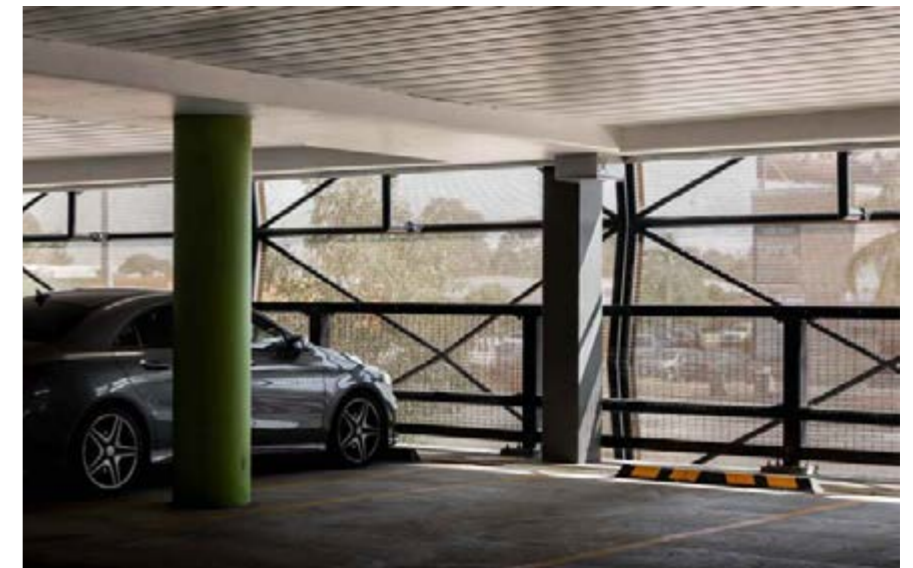
As Western Australia has a sub-tropical climate, using a material that cuts heat but maintains air flow was crucial for the project. Kaynemaile significantly reduces both radiant heat through direct sunlight (EMR) and thermal conductive heat from entering the interior of a building by up to 70%. This gives you the ability to let daylight in and manage the passive solar gain—all while maintaining visual transparency.



← LEFT: The three-dimensional design is made up of a series of projecting pyramids which are stretched across a steel sub-frame.

↑ ABOVE: The design along with the shimmering Bronze mesh are effective in breaking up the long horizontal facade of the building.

→ RIGHT: Kaynemaile screens provide solar shading without obscuring views from the inside out.





Photography by Fred L'Ami

KAYNEMAILE EXTERIOR

Kinetic Collaborations

PROJECT

Kinetic Parking Garage Feature

DESIGN

Ned Kahn, Johnson Fain Architects
and Kaynemaile

LOCATION

Los Angeles, USA

Kaynemaile isn't just a manufacturer—we work collaboratively with architects, designers and artists around the world. For this mixed use development in Los Angeles we collaborated with American artist Ned Kahn to create a unique installation.



Situated at the heart of the Playa Vista complex this 30 metre tall kinetic installation winds around the parking garage ramp, helping to connect the streetscape to the surrounding buildings.

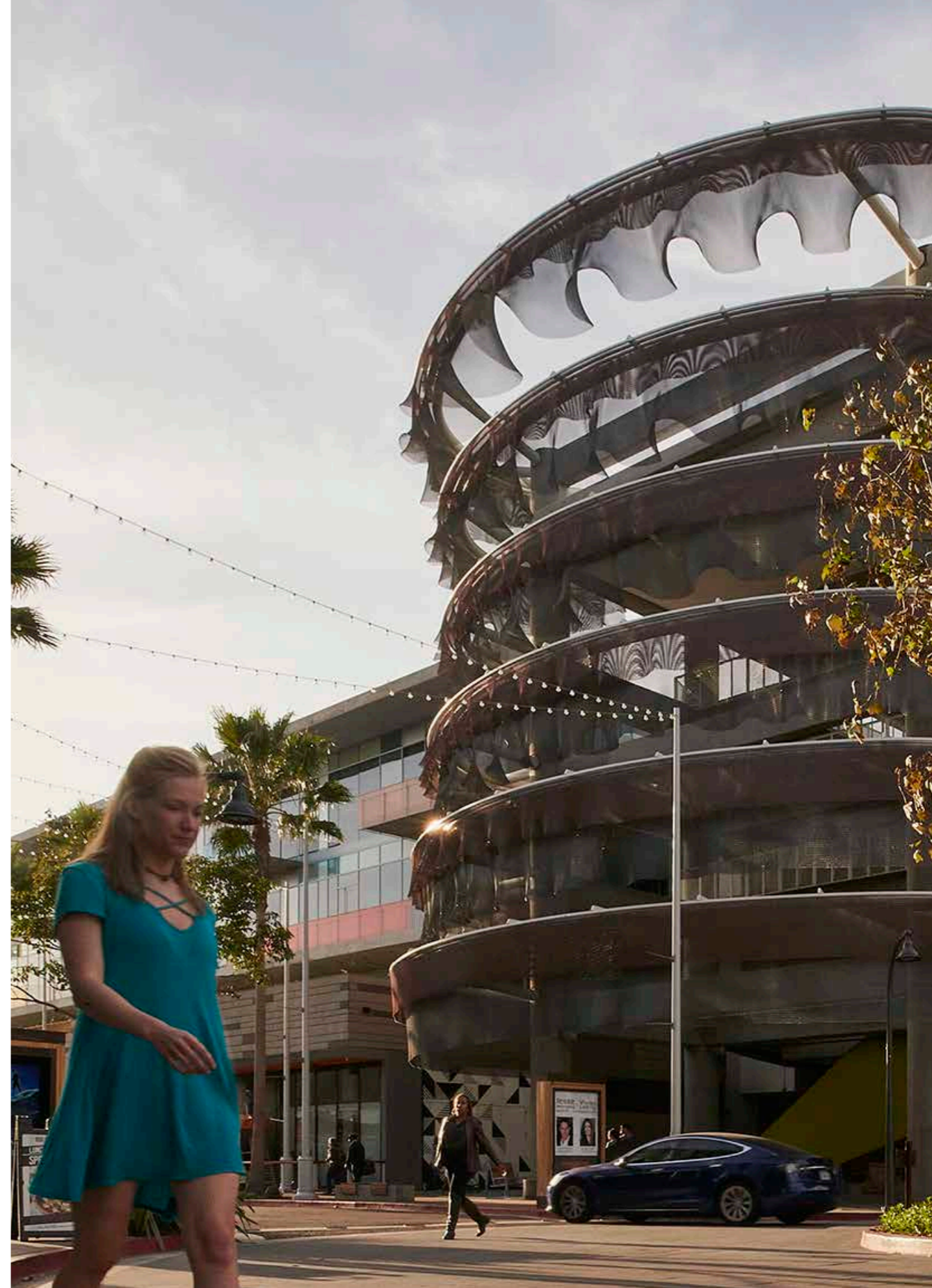
The dynamic installation takes advantage of a wind channel from the nearby Pacific Ocean that keeps the ribbons of Kaynamaile moving, creating a lively counterpoint to the functional nature of the parking structure.

↑ ABOVE:

The translucent nature of Kaynamaile contrasts with the surrounding materials day and night.

→ RIGHT: The mesh movement varies with the wind speed.

→ FAR RIGHT: The installation stands as a focal point in the neighbourhood and is easily seen from out lying streets.





Photography by Angus Martin

KAYNEMAILE EXTERIOR

A Wave of Inspiration

PROJECT

Pacific Fair Shopping Centre
Parking Garage

DESIGN

Scentre Group

LOCATION

Broadbeach, Australia

“We were really impressed by the speed with which Kaynemaile expedited the project. The timeframe for this facade was six months and Kaynemaile succeeded in delivering within four.”

—Stephen Simpson, Scentre Group

“Using Kaynemaile really invigorated this project for us. It turned a parking garage into a compelling architectural statement.”

— STEPHEN SIMPSON
Regional Manager Design Projects, Scentre Group

When Scentre Group’s design team approached Kaynemaile with the concept for Pacific Fair it seemed like a perfect match. Initially designed with a rigid metal panel in mind it soon became apparent that the traditional material lacked the fluidity the designers needed. Additionally, the need for a substantial sub-frame for a metal panel system had increased the project costs significantly.

Kaynemaile can be made to any size in a seamless piece, this meant it easily worked with the pre-designed structural frame heights and gave the designers the flexibility they needed.

With Scentre Group encouraged by the material’s possibilities, our fabrication team quickly turned out new screen concepts at scale for review—a fast track prototyping process that gave the client confidence to progress further with the design.

Kaynemaile’s collaborative approach extended into the detailing phase as we developed a unique fixing system to work with the client’s design, giving adjustability on site and allowing for easy maintenance over time.

Along with the three-dimensional screens the main parking garage exterior also features a Kaynemaile black coloured flat screen—a seamless single-piece screen measuring 50 metres wide by 9 metres high, lifted and fixed off in a day by hand without the need for costly site cranes.

“We were really impressed by the speed with which Kaynemaile expedited the project. The timeframe for this facade was six months and Kaynemaile succeeded in delivering within four” said Scentre Group’s Stephen Simpson.

During the day the sun sparkles off the ten million or so individual rings of the mesh screen. At night the second layer of mesh becomes a rippling wave moving with the breeze from the nearby Pacific Ocean, transforming a utilitarian parking garage into a stunning landmark—a collaborative end to end solution.

↑ **OVER:** The Champagne coloured mesh changes colour over the course of the day depending on light and viewing angle.

→ **TOP RIGHT:** This large Obsidian Black single piece screen was lifted and fixed off in a day.



← **LEFT:** The three-dimensional screen draws inspiration from the waves and golden sand of the nearby beaches.

→ **BOTTOM RIGHT:** Feature lighting gives the screen a distinct day and night look.



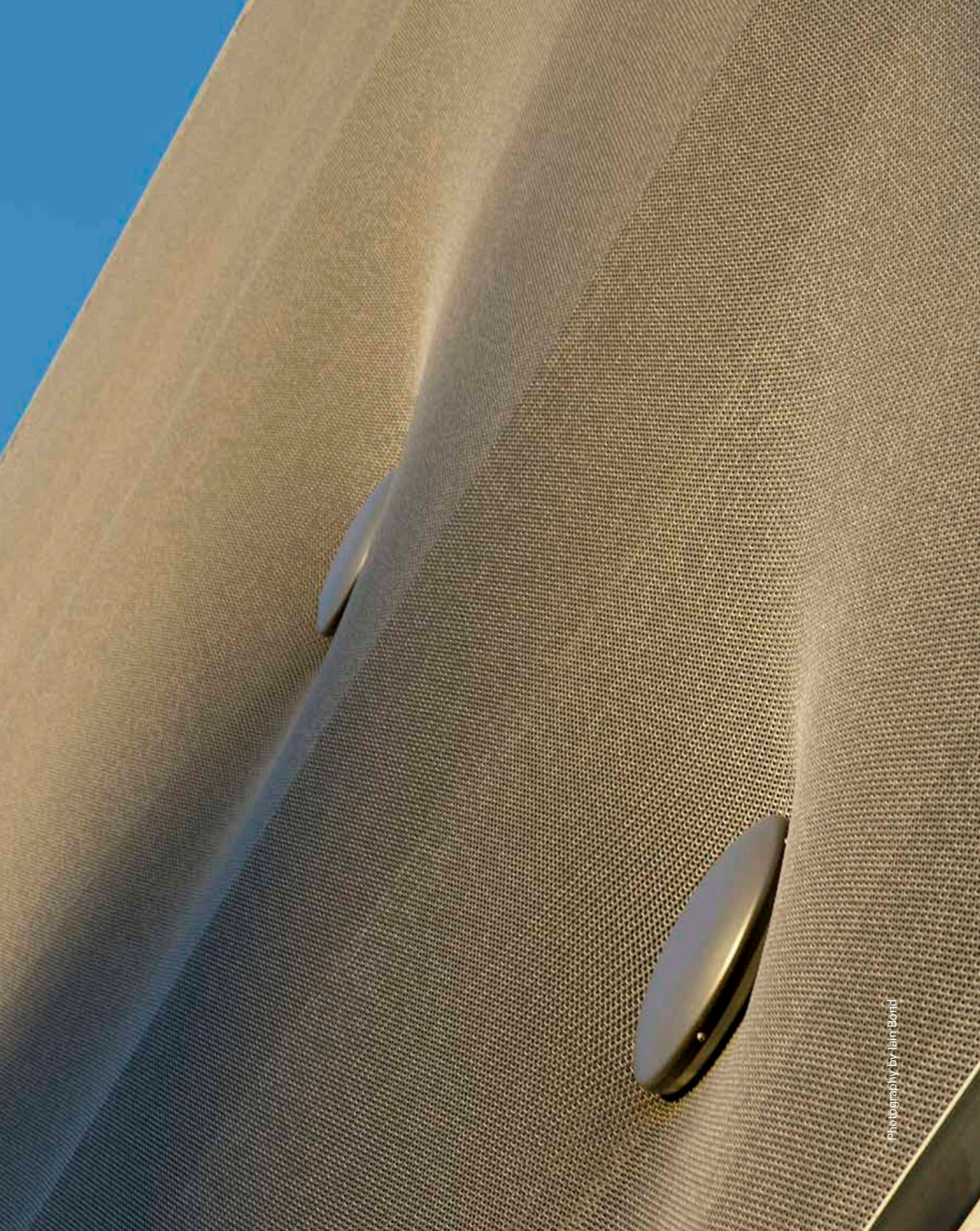


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EM FITNESS CENTRE

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ROADSIDE
Nerang 11
Brisbane 81
MILES FROM HERE
Tamborine Mtn. 33
Springbrook 41
Biwa Burras 48
O'Reilly's Plateau 74



Photography by Iain Bond

KAYNEMAILE EXTERIOR

Seamless at Scale

PROJECT

Agostino Group Parking Garage

DESIGN

Tectvs

LOCATION

Adelaide, Australia

This multi-storey parking garage for Commercial & General was clad using only eight individual screens—the biggest being a seamless piece 58 metres wide x 16 metres high.



Inspired by an old leather couch the architect's unique concept called for button-like discs to be pulled back into the Kaynemaile mesh. To get the design right we prototyped the concept at scale, making sure it could be successfully realised and installed within the fast installation schedule.

The buttons create significant depth in the screens, giving dynamic colour and shadow changes as the light moves from day to night across the building's facade.

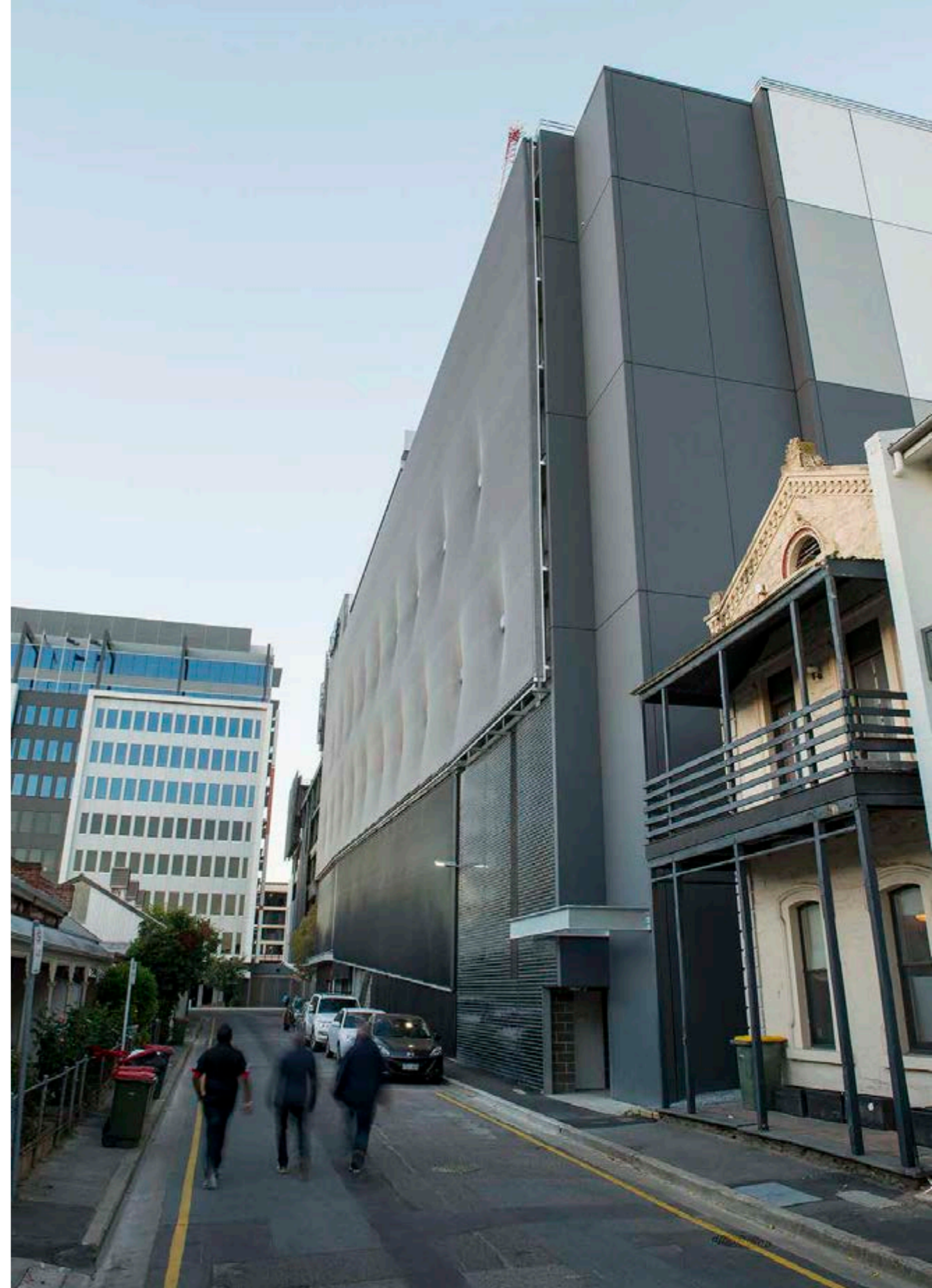
With install speed in mind we designed our fixing systems to allow these large screens to be lifted and fixed off in a day, significantly reducing road closures and disruptions to the surrounding neighbourhood.

As well as great airflow characteristics Kaynemaile's solar reduction properties mean these large screens provide up to 70% reduction in solar gain, reducing heat transfer into the building significantly.

↑ **ABOVE:** The depth of the pull back is highlighted along the facade.

→ **RIGHT:** This single piece screen measures 58 metres wide x 16 metres high.

↓ **OVER:** At night the solid yet translucent nature of Kaynemaile is highlighted.



Agostino Group

Agostino Group

Wilson
P
↙

111 Angus Street

CITY TINT CENTRE

- Paint Protection
- Rust Protection
- Fabric Protection
- Leather Protection
- Window Film
- Security Film
- Car Alarms
- Cruise Control

P
→

PAY & DISPLAY

Alarms, In...
Mobil...

109

KING
NOW
OPEN

A Modern Facelift

PROJECT

Coco California Retail Store

DESIGN

Bascomb Family

LOCATION

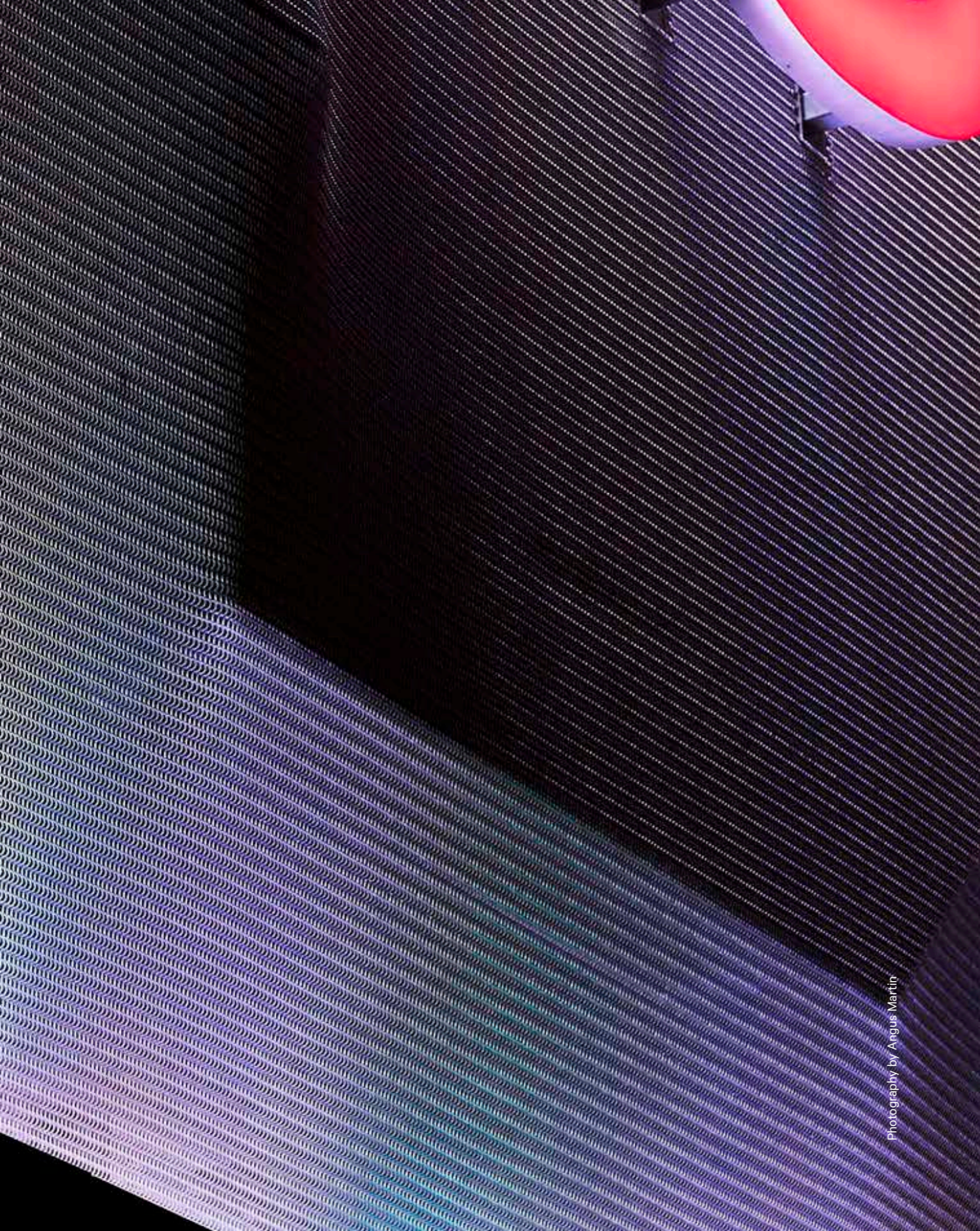
Port Lincoln, Australia



↑ ABOVE: The finished exterior is clean and seamless providing a modern update to the store front.

→ RIGHT: A single sheet of Kaynemaile was attached to the existing facade.

Coco California used Kaynemaile mesh to modernise their existing, low-key retail frontage. A simple and effective way to add some upscale cool to an existing facade.



Photography by Angus Martin

KAYNEMAILE EXTERIOR

Shifting Shadows

PROJECT

Aspley Hypermarket Shopping Centre

DESIGN

Thomson Adsett

LOCATION

Brisbane, Australia

Kaynemaile collaborated with architecture firm Thomson Adsett to develop a unique approach to the entrance at Aspley Hypermarket shopping centre.

Stretched over an angular steel frame, the design highlights the unique properties of Kaynemaile, providing a solid yet fabric-like screen.

Each screen was fabricated and installed as seamless single pieces, the largest being 60 metres long by six metres high. Kaynemaile's attachment systems made this installation fast and simple and allowed for easy placement of signage supports at multiple locations over the single piece screens.

The shadow play on the Silver coloured screens changes dramatically from day to night, creating a dynamic architectural feature.



← LEFT: Architectural lighting dramatically changes the look for night time shoppers.

↑ ABOVE: Sun light accentuates the shadow play across the Kaynemaile mesh screen.

→ RIGHT: Kaynemaile mesh easily stretches over the geometric sub-frame.

Solar Shading Feature

PROJECT

Arthur Holmes Distribution Centre

DESIGN

Tse Architects

LOCATION

Wellington, New Zealand



↑ ABOVE: The angled exterior panels provide privacy and weather protection without obscuring the view out.

→ RIGHT: Fitted within a steel frame Kaynemaile screens provide up to 70% solar reduction to building interiors.

Fitted within a zig-zag sub frame, these Kaynemaile screens create an eye-catching feature on an existing distribution centre and provide solar shading to the offices behind.

Double Bay Elegance

PROJECT

Double Bay House

DESIGN

SAOTA Architects in association
with TKD Architects

LOCATION

Sydney, Australia



↑ ABOVE: The steel sub-frame conceals architectural lighting for the Kaynemaile screens.

← LEFT: During the day, Kaynemaile reduces heat transfer into the interior by 70%.

Photography by Adam Letch

Kaynemaile screens provide privacy and solar shading to this award-winning, contemporary home situated in Sydney's harbourside suburb of Double Bay. The Steel coloured mesh screens compliment the elegant design and thoughtful material selection.

→ **THIS PAGE:** Kaynemaile screens provide privacy without obscuring the stunning harbour views.

→ **OVER:** At night, lighting highlights the range of textures and materials.





MIKAYA

Sliding City Views

PROJECT

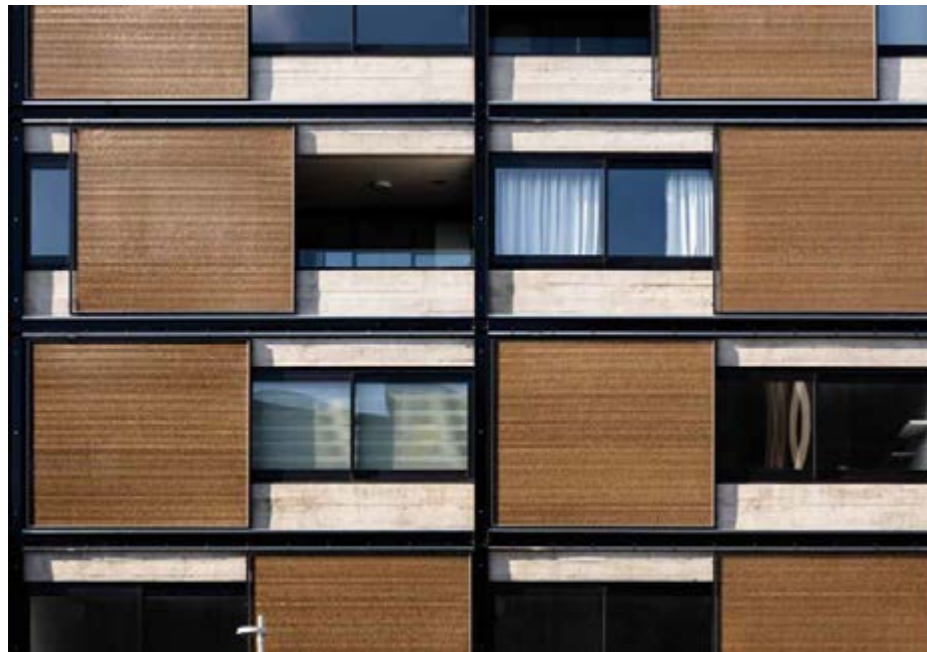
Uno Duo Apartments

DESIGN

Form Architects

LOCATION

Auckland, New Zealand



↑ ABOVE: These solar screens can be easily moved by apartment residents providing an alternative to fixed panel systems.

← LEFT: Fitted within a steel frame Kaynemaile screens provide up to 70% solar reduction to the apartment interiors.

Photography by Jason Mann

With up to 70% solar reduction our Kaynemaile screens are perfect for multi-unit apartment screening. Fitted within a movable steel sub-frame Kaynemaile screens provide an ideal solution for privacy and solar shading.

Oceanside Shading

PROJECT

Residential Solar Screen

DESIGN

Adam Taylor Architecture

LOCATION

Mount Maunganui, New Zealand

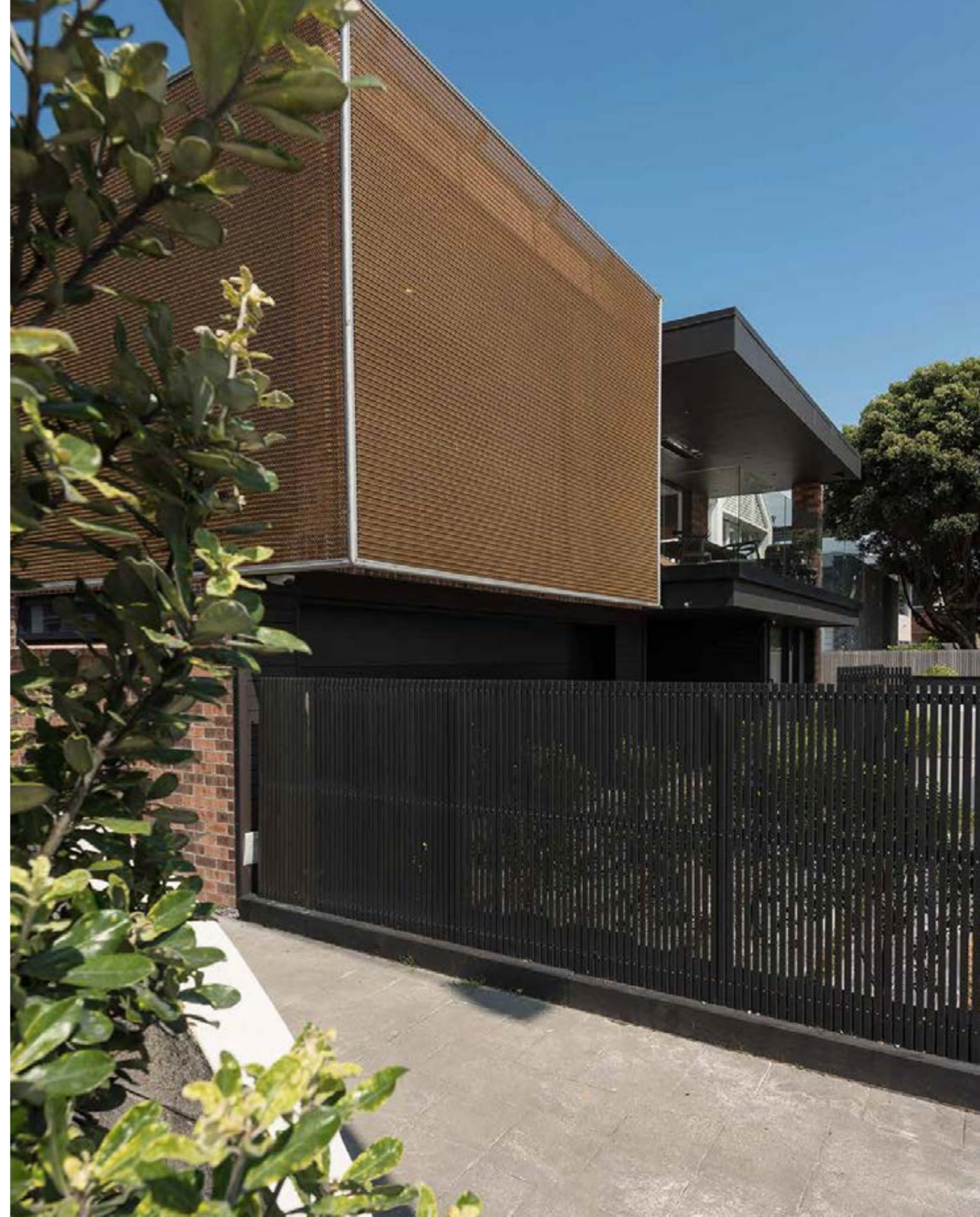


Photography by Marshall Masters

Kaynemaile mesh provides solar reduction and privacy for this home situated steps away from the beach. Kaynemaile mesh easily copes with the demanding coastal environment and extreme Southern Hemisphere sun.

Privacy screening was a major factor for the material selection as the house faces a busy road in a seaside city. Kaynemaile mesh provides privacy without restricting the sea views.

Installed as single pieces within a simple steel sub-frame, the screen is an elegant contrast to the harder material surfaces of the house.





All you need to know about Kaynemaile mesh.

Kaynemaile’s polycarbonate mesh is a patented, world-leading innovation. With over 60 years of polycarbonate material science and research to call on we know our mesh inside out. We’ve undertaken extensive laboratory and field tests to ensure our product range works and we keep testing it everyday. We think the benefits of our product are extraordinary.



70% Solar Reduction

Kaynemaile significantly reduces both radiant heat through direct sunlight (EMR) and thermal conductive heat from entering the interior of a building by up to 70%. This gives you the ability to let daylight in and manage the passive solar gain—all while maintaining visual transparency.



Super Fast Installation

Kaynemaile is lightweight (3kg per square metre) and goes up fast, cutting down the install time dramatically and saving costs. Our fixing systems are simple and we don’t need the same level of sub-frame as metal products. This means our installed rate is more cost effective than metal or glass panel products.



Unlimited Screen Size

We are not limited by panel size—we can make our screens to any height or width without joins or distracting gaps. This gives you freedom at the design concept stage that other materials don’t. Making our screens to the size you need them means less structure, less fixings, and less time on site.



Eco-conscious Manufacturing

We are constantly striving to reduce the environmental footprint of our business. Our unique manufacturing process means we only make what we need. Our materials are fully recyclable using low-energy processes.



10 Year Warranty

Kaynemaile has a 10-year standard warranty. Our seamless mesh is UV stabilised using inorganic colours for long term stability and full recyclability.



Trusted Durability

Metal based materials corrode and oxidise in coastal conditions. Kaynemaile does not. Our mesh holds true to its tensile strength. We use mineral colour-fast pigments that will not stain your building when it rains, unlike traditional metal mesh materials.



Unbeatable Strength

Our mesh is made from the highest performing thermoplastic. It is extremely robust and impact resistant. Thermally stable from -40°F to 248°F (-40°C to 120°C).



Simple Attachment Systems

Our attachment methods for both exterior and interior systems are simple and based around two systems that utilise tube and hooks or extruded aluminium fixings. Even our custom projects are based around these simple attaching systems. For fixing details, contact us at info@kaynemaile.com.



Fire Performance

Class 1 or A

Test	Result
GLOBAL	
ISO 9705 Room Corner Test <i>Equivalent US NFPA 286 room corner classification (Class A*) performance</i>	1-S
IMO Resolution A.652	Pass smouldering cigarette & match flame equivalent
UL94-VO/3.0	Self-extinguishing
USA	
NFPA 701	Pass
Conforming with section 803.12 stability at 200°F	Pass
ASTM D 2843	Smoke Index of 70.9
ASTM 635	Class HB-CC1
ASTM D 1929 Self-Ignition Temperature	968°F (520°C)
ASTM D 1929 Flash Ignition Temperature	842°F (450°C)
ASTM D 2843 Smoke Density Rating	70.9
EU	
DIN 4102 part 1	Pass B1
NZ / AU	
AS 1530.2	Flammability index result of (FI) = 6
AS 1530.3	Regulatory indices - Ignitability index = 0, Spread of flame index = 0, Heat evolved index = 0

Colour Options

Kaynemaile can be produced in virtually any colour, giving you unlimited options for your exterior or interior project.

Colour Details

We offer a range of standard colours (pictured right) which can be used for exterior and interior applications.

Interior Colours

All Kaynemaile standard colours are suitable for interior use.

Exterior Colours

Our standard Kaynemaile colour range for exterior use includes: Bronze, Copper, Steel, Obsidian Black, Translucent Black, Silver and Champagne.

Finishes

All colours are in a gloss finish.

Custom Colours

Kaynemaile can manufacture virtually any custom colour for you. We work off standard RAL or Pantone colour codes. Supply us the colour codes and we can provide the swatches for final approval before manufacture.

Additional charges may apply for custom colours. Talk to the Kaynemaile team for details.

Warranty

We stand behind our products and offer a longer warranty period than most of our competitors.

We have a 10-year warranty on all Kaynemaile hardware and mesh for both interior and exterior applications.



White Gloss

Ruby Red

Azure Blue

Water Clear

Jade Green

Ice Blue

Bronze

Copper

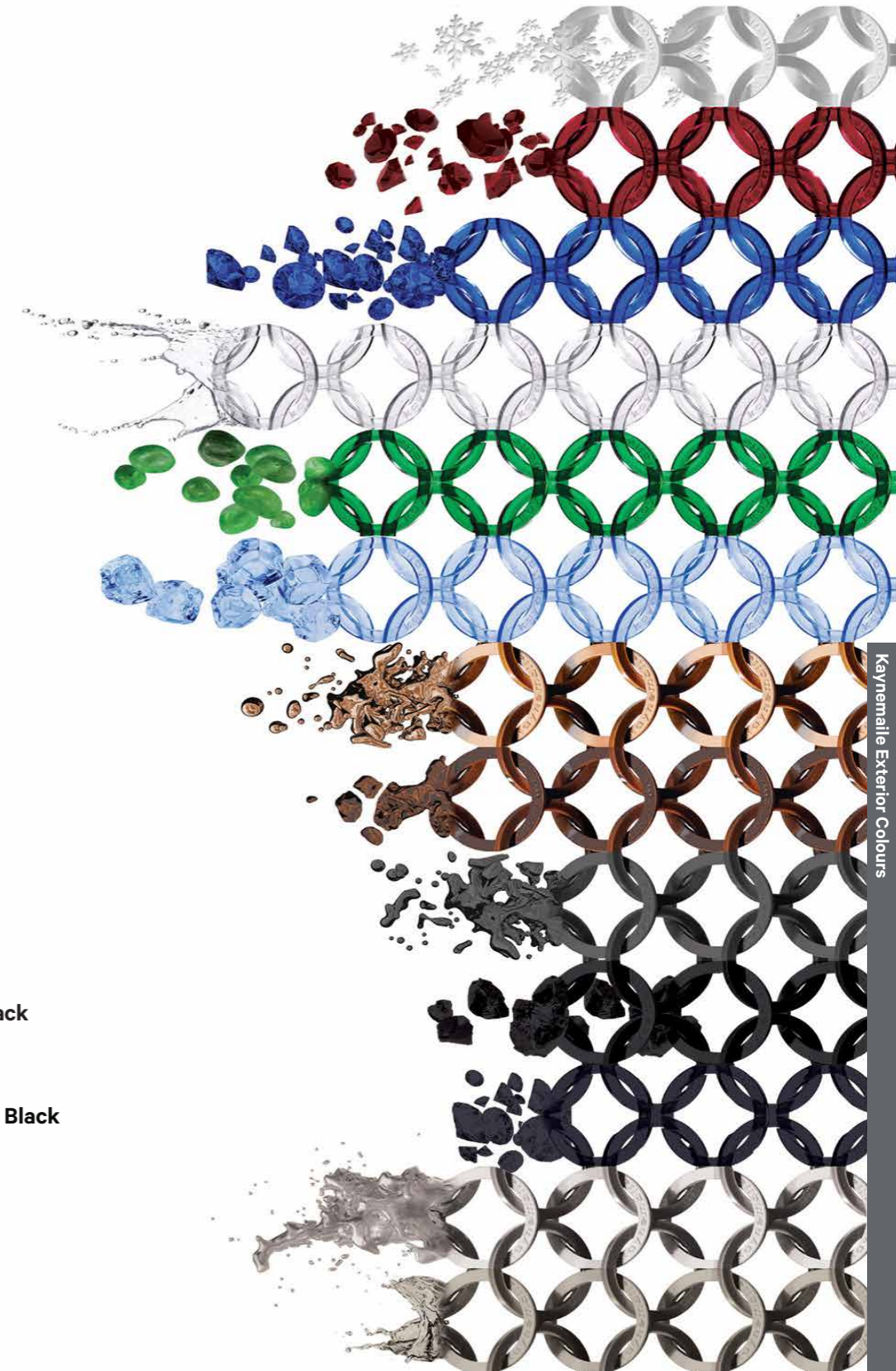
Steel

Obsidian Black

Translucent Black

Silver

Champagne



Technical Information

Kaynemaile is extremely lightweight and easy to install. It goes up fast which dramatically reduces construction schedules and costs. It is tough and impact resistant, yet flexible enough to be stretched over a frame to execute complex three dimensional designs. Screens can be made to any height or width without joins or expansion gaps.

For more visit:
www.kaynemaile.com/technical

Kaynemaile mesh is lightweight and doesn't need the same level of fixings or substructure as metal products. Our screens go up fast cutting down install time dramatically and saving costs.

In line with our minimal waste philosophy, Kaynemaile mesh can be completely recycled at the end of its life.

Features

Weight: 0.6lbs/ft² (3kg m²)

Sizes: Unlimited in size.

Colour palette: Kaynemaile mesh comes in a range of solid colours. For colour range see page 56 of this booklet.

Supplied hardware: Kaynemaile mesh screens are supplied with mesh and our fixing system to suit your subframe.

Hanging system

Our Kaynemaile mesh screens utilise our 0.5in (12.7mm) stainless steel tube at the top and bottom and our 0.9in wide x 0.39in high (23mm x 10mm) low profile anodised aluminium track at the sides.

Frame requirements

Kaynemaile mesh screens are under tension vertically. Kaynemaile mesh screens need a frame around the full perimeter. The size of the screen will determine the sub-frame requirements. Your sub-frame can be concrete, steel or timber.

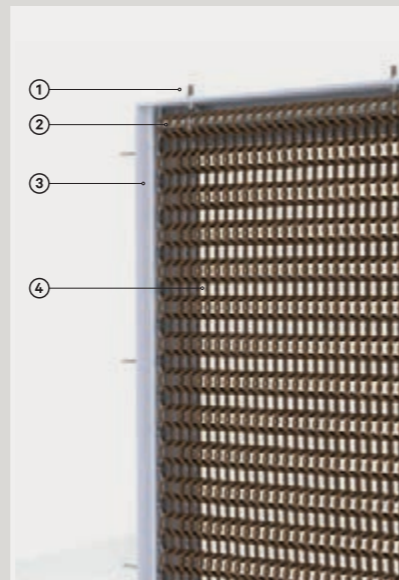
We can provide you with wind loading details so you can accurately determine your sub-frame requirements. Our ideal sub-frame for large screens is made from steel equal angle.

Screen tension

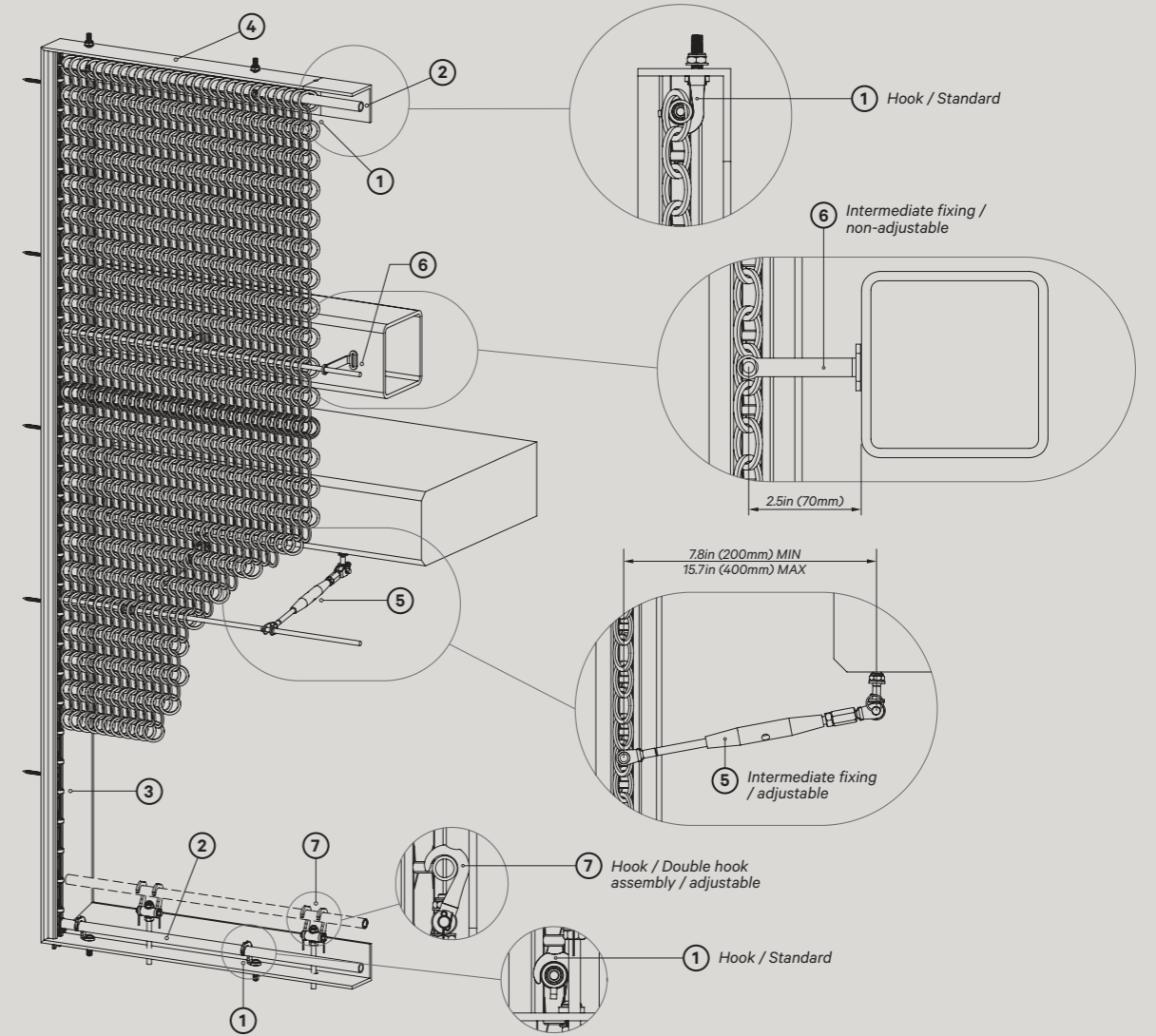
Kaynemaile mesh screens are tensioned vertically.

How to specify your screens

To specify your Kaynemaile mesh screen just let us know the approximate width and height and we will advise on fixing details. If your screen is over 13ft (4m) in height it may require intermediate fixings.



- ① Fixing screw
- ② S/S hanging tube & hook
- ③ Low profile aluminium track & polycarbonate saddles
- ④ Kaynemaile mesh



- ① Standard 0.12in (3mm) thick stainless steel hook. Typical hook spacing is 12in (300mm) however spacing varies based on the screen size and the project requirements. Hook fixings are 0.25in (M6 metric).
- ② Standard 0.5in (12.7mm) stainless steel tube through top and bottom mesh rows.
- ③ Standard aluminium low profile track. Finish is silver anodised. Uses 0.1574in fixings (M4 metric) at 7.87in (200mm) spacing.
- ④ Typical steel equal angle full perimeter subframe. Minimum size is 3.2in (80mm).
- ⑤ Adjustable intermediate fixing. Screens over 13ft high (4m) may require intermediate fixings. An adjustable fixing is used where a backspacing exceeds 2.5in (70mm) or when the intermediate fixing is required to attach to the underside of a concrete slab or sub-frame. All intermediate fixings connect to a 0.25in (6mm) solid stainless steel rod run internally through the mesh.
- ⑥ Non-adjustable fixing. Screens over 13ft (4m) high may require intermediate fixings. A non-adjustable fixing is used where the backspacing exceeds 2.5in (70mm). All intermediate fixings connect to a 0.25in (6mm) solid stainless steel rod run internally through the mesh.
- ⑦ Adjustable double hook arrangement. Typically used for large screens that may require spot-applied tension adjustments or screens with non-parallel bottom edges. Uses 0.25in fixing (M6 metric).

Kaynemaile for interiors gives the ability to divide and define spaces while providing transparency and airflow.

Collaborate with us

We're happy to answer your questions — from product information to technical assistance. Call or send us an email. We're here to help.



Kaynemaile
Architectural Mesh

CONTACT US:

USA Free Call 1855 387 5440

AU Free Call 1800 231 153

NZ +64 4 473 4989

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