SHAPESHIFT TECHNOLOGIES

ShapeShift Standard Product Range

ShapeShell™-RC Facade Panels

LRQA CERTIFIED ISO 9001

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LRQA CERTIFIED ISO 9001

Bridging Creativity and Buildability

Over the past two decades, ShapeShift Technologies has built its reputation as the preferred partner for the world's leading architects, consultants, and Tier 1 builders, amassing a portfolio of over 320 landmark projects across 16 countries.

Through a vertically integrated design to manufacture process, ShapeShift delivers intelligent, sustainable, low-risk solutions by leveraging cutting-edge aerospace technology and precision manufacturing techniques at scale.

25 Years Experience

16 Countries

372.000 sqm Installed

320 Projects

ShapeShell™ by ShapeShift

Built for Real-World Performance

ShapeShell™-RC is designed to meet the demands of modern architecture, combining durability, fire safety, and advanced material engineering. This Glass Fibre Reinforced Concrete (GRC) solution offers a superior alternative to traditional materials, providing strength, reliability, and versatility for both architectural designs and practical installations.

Whether for bold design statements or functional applications, ShapeShell™-RC empowers architects and builders to achieve their vision with confidence. Its advanced formulation ensures consistent performance, enabling it to withstand the challenges of weather, time, and structural demands while maintaining a sleek and contemporary aesthetic.

ShapeShell™-RC is a future-ready solution, designed to exceed the needs of evolving architectural and construction requirements. Experience the next generation of GRC with ShapeShell™-RC: Built for Performance.

ShapeShell™-RC Standard Façade Panel

What is ShapeShell™-RC?

ShapeShell™-RC in the next reinforced concrete, specifically designed for heavy-duty architectural applications, where fire safety and durability are critical. This substrate is classified as non-combustible under the AS 1530.1 standard, making it highly suitable for projects that demand stringent fire resistance. In addition to its safety features, ShapeShell™-RC offers a range of protective coatings, including advanced fluoropolymer and gel coat finishes, which enhance both durability and aesthetic appeal.

Product Composition

ShapeShell™-RC essentially consists of the cement or calcium silicate formed by a chemical reaction of siliceous and calcareous material, reinforced by fibres. Those are:

- Portland white cement
- Reinforcing fibres
- Fine aggregate
- Mineral pigment and paint
- Functional additive
- Selected material filler proving extra smooth surface

Applications

Standard ShapeShell™ RC Façade Panels are suited for a variety of architectural and industrial uses, including:

- Façades for high-rise buildings and commercial structures.
- Infrastructure requiring robust fire safety and lightweight solutions.
- Projects prioritising sustainability through reduced material weight and optimised logistics.

Why Choose Standard ShapeShell™ RC Façade Panels?

ShapeShell™-RC Façade Panels represents a forward-thinking approach to architectural cladding. By integrating advanced coatings and leveraging precision manufacturing, it delivers a reliable and versatile solution that exceeds the limitations of traditional materials. Its innovative blend of stiffness, lightweight construction, and fire safety provides both functional and aesthetic excellence, making it a trusted choice for modern designs.

Standard ShapeShell™ RC Façade Panel Range:

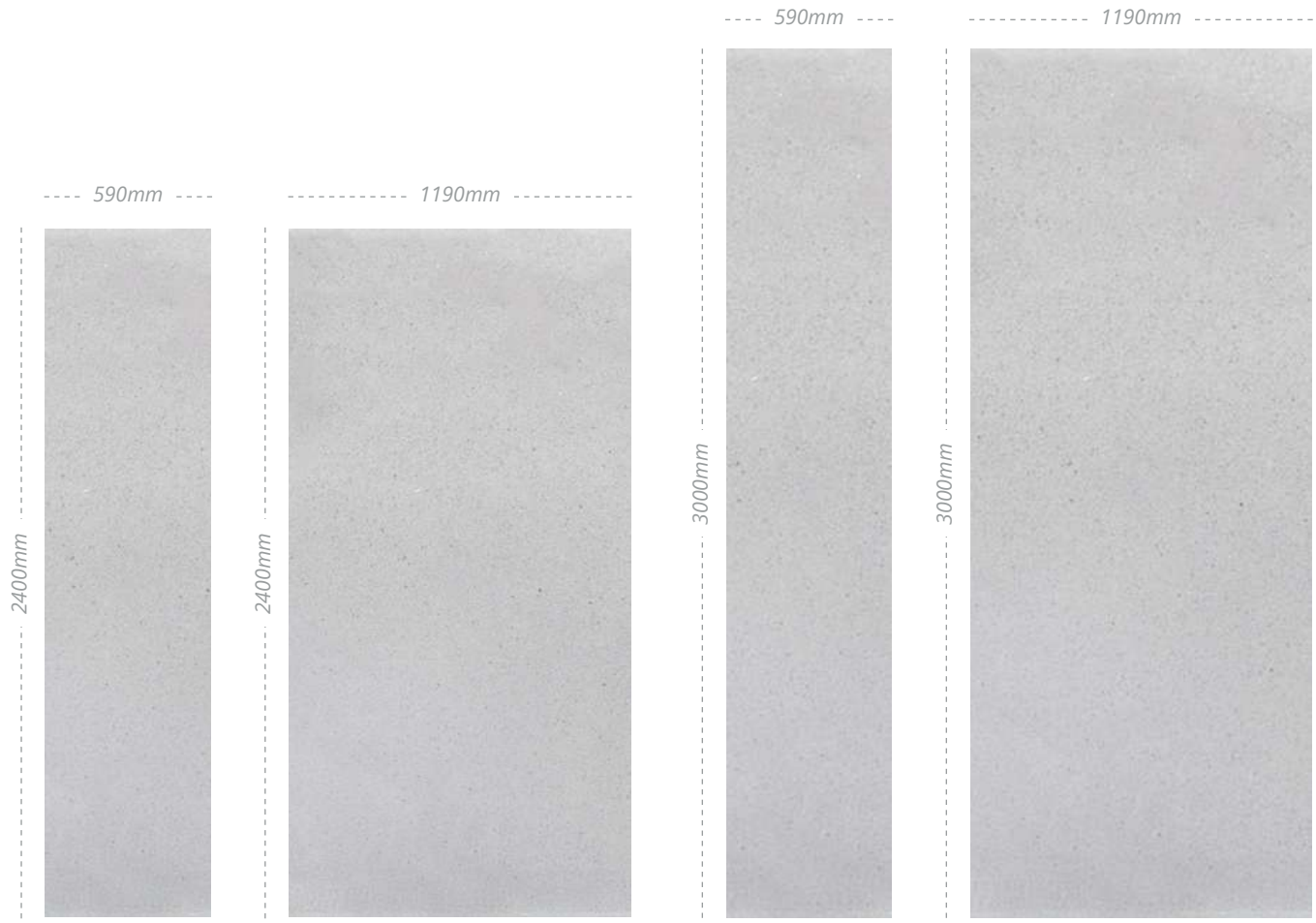
Features and Benefits

ShapeShell™-RC Façade Panel, the next generation of Glass Fibre Reinforced Concrete (GRC), is engineered to meet the demands of modern architecture. Designed for durability, fire safety, and enhanced performance, it is a reliable and versatile solution for a wide range of architectural and industrial applications. By combining advanced material technology with standardisation, ShapeShell™-RC delivers exceptional value to architects, contractors, and developers.

Key Features and Benefits

- Cost Efficiency: Economies of scale in production reduce manufacturing costs and lead times, making standard panels more affordable compared to bespoke designs.
- Faster Project Timelines: Ready-to-use panels simplify installation and reduce project delays, eliminating the time required for custom mould fabrication.
- Enhanced Structural Performance:
  - ShapeShell™-RC is 50% stiffer than standard GFRC, providing superior strength and rigidity.
  - It is significantly lighter, weighing 100% less than precast concrete panels, enabling easier installation and reduced structural loads.
- Exceptional Fire Safety:
  - Certified as non-combustible under the AS 1530.1 standard, making it ideal for projects requiring stringent fire resistance.
  - Suitable for high-rise buildings, hospitals, and schools where compliance with rigorous fire safety regulations is essential.
- Durability and Longevity:
  - Protective coatings such as advanced fluoropolymer and gel coat finishes resist weathering, UV exposure, and abrasion.
  - Long-lasting performance ensures the aesthetic appeal is maintained over time.
- Standardised Options and Precision Manufacturing:
  - Available in standard sizes, colours, and surface finishes, ShapeShell™-RC panels streamline specification and ensure design consistency.
  - Panels are batched, blended, and moulded to exacting industry standards without the need for project-specific shop drawings, making them ideal for faster project timelines.
- Flexibility in Applications: Standard panels are compatible with various building types and designs, offering versatility for both commercial and residential structures.
- Improved Quality Control: Factory-controlled production ensures consistent strength, finish, and compliance with industry standards.
- Sustainability: Lightweight panels reduce transport emissions and material waste, contributing to sustainable construction practices.
- Risk Mitigation: Predictable outcomes reduce complexities associated with bespoke designs and minimise errors during installation.

ShapeShell™-RC Standard Panel Size



More to Come

Colour & Surface Finish

ShapeShell™-RC panels can achieve a wide array of bespoke finishes & textures including:

- Standard off-form finish (i.e. smooth precast equivalent).
- Custom oxide colours/pigments.
- Acid wash finish on surface to create rough texture.
- Option to expose aggregates if required.
- Alternatively finishing of panels with our advanced ShapeShift external PVDF or internal coating system in any standard RAL colour.
- Also compatible with other custom finishes if required.
- Plus an anti-graffiti coating can be added if desired.

Low Wash

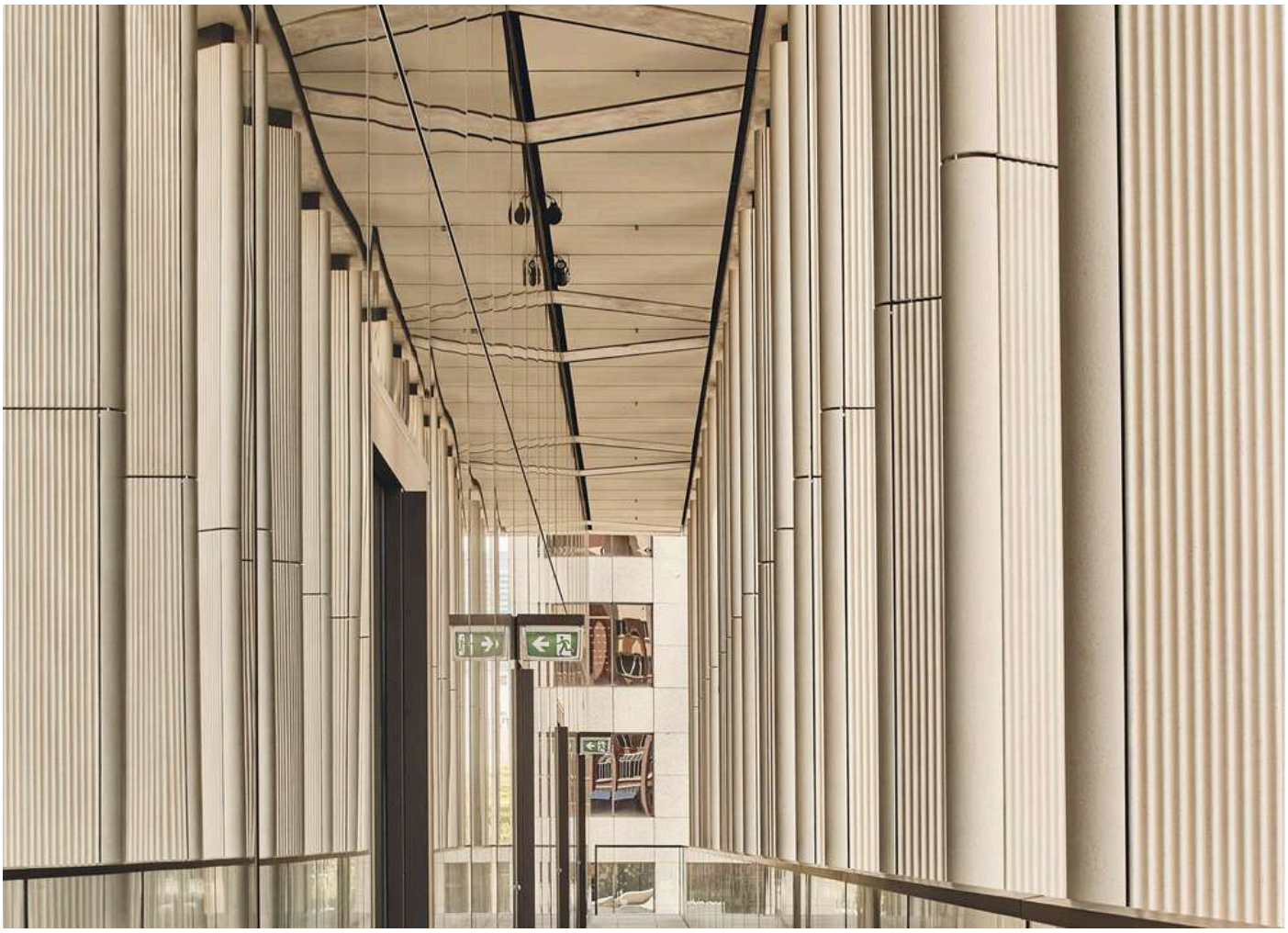
Medium Wash

Heavy Wash

White-Grey
Colour Range

Brisbane Girls Grammar School. Brisbane, QLD

Poly Centre, 210 George Street. Sydney, NSW



Sandstone
Colour Range

Parramatta Public School. Parramatta, NSW

Wide range of colour variations

Off-form

Matte White

Brick Colour Off-form

Custom matched to any reference colour or physical sample as required

Aggregate Finish

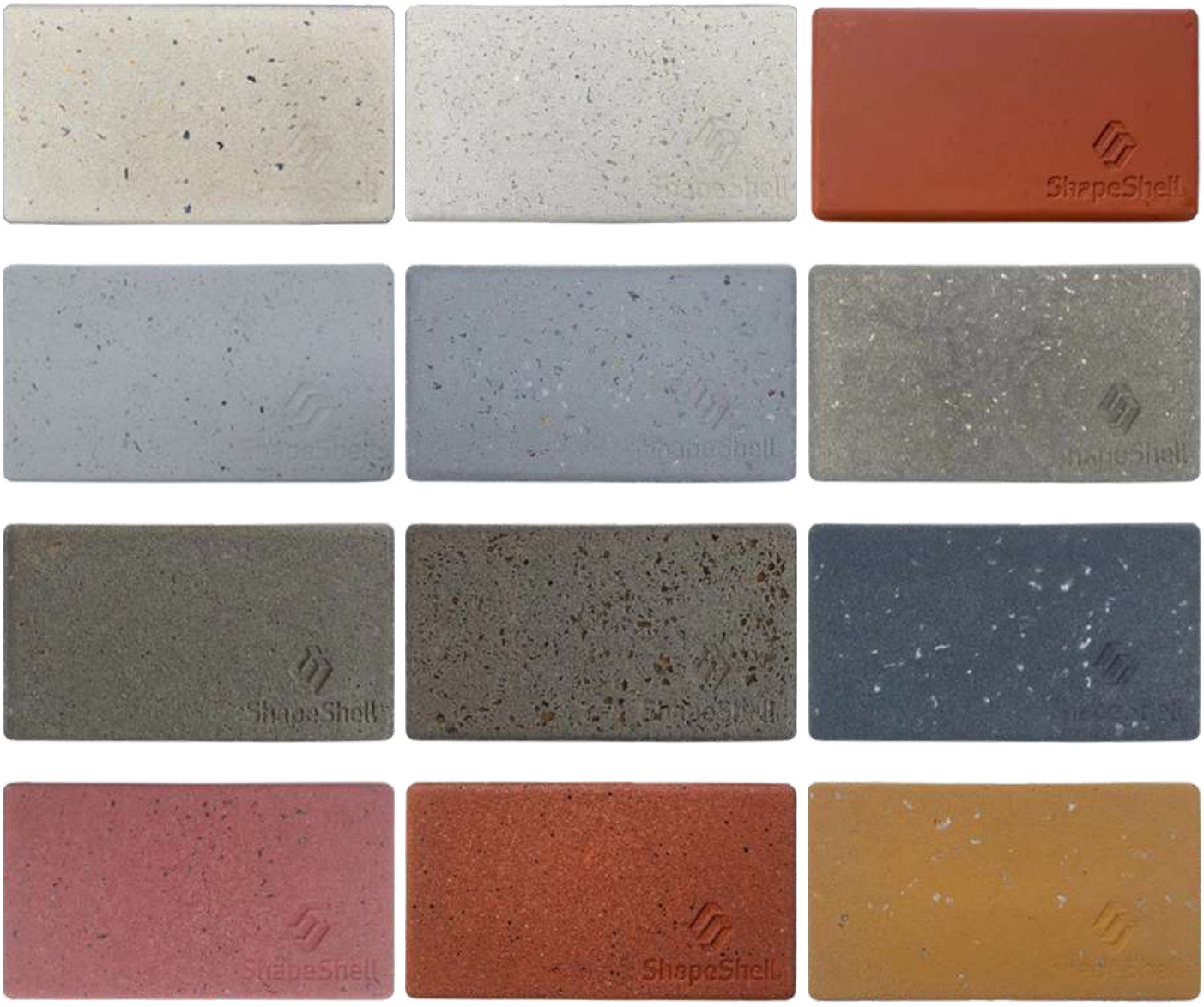
Beyond offering a wide range of colors and surface finishes, we possess extensive capabilities in combining various materials with rock aggregates. This sets us apart as we can enhance aesthetics and cater to the diverse needs of various building conditions.

It allows us to create unique and visually appealing surfaces that can withstand heavy foot traffic, makes us the ideal choice for both residential and commercial projects.

Wide Range of Aggregates

Harcourt Granite 6mm	Sunset Gold Marble 6mm	Belvidere Marble 6mm	Super Off White Marble 6mm	Padthaway Green Granite 6mm	Koonunga Hill Grey Marble 6mm
Moppa Marble 6mm	Felspar 6mm	Cudgee Marble 6mm	Riverina Granite 6mm	Calca Granite 6mm	Angaston Pink Marble 6mm
Black Granite 6mm	Crushed Stonefield 6mm	Burgundy Granite 6mm	Seafoam Marble 6mm	Sienna Granite 6mm	Keyneton Green Epidote 6mm

Samples with aggregate finish



Standard ShapeShell™ Façade Panel Railing and Attachment:

System Features and Benefits

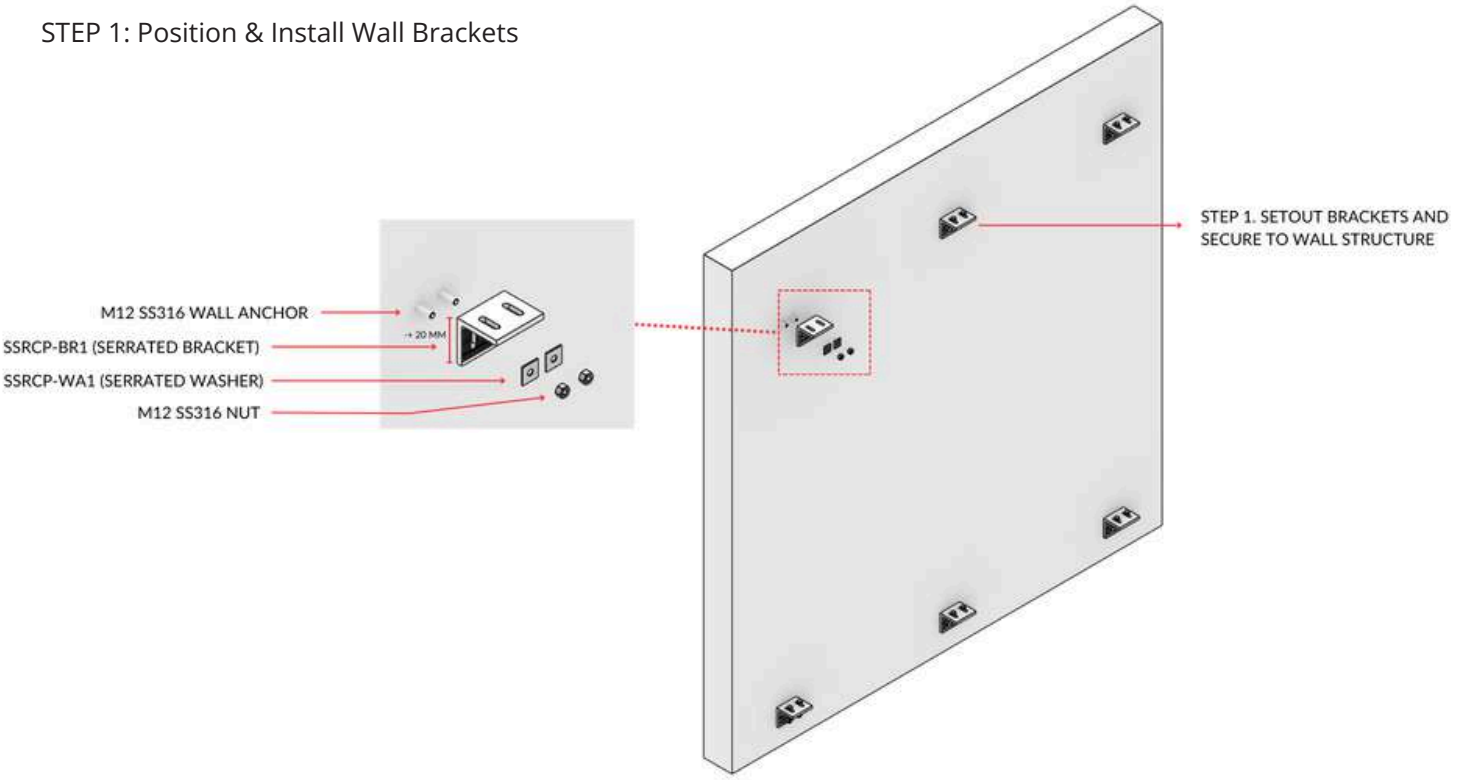
The ShapeShell™ Railing and Attachment System is engineered specifically for use with the Standard ShapeShell™ RC Façade Panel Range. Designed to simplify installation, ensure structural integrity, and enhance the visual appeal of facades, this package integrates precision-engineered components and high-quality materials to meet the demands of contemporary architectural projects.

Key Features and Benefits

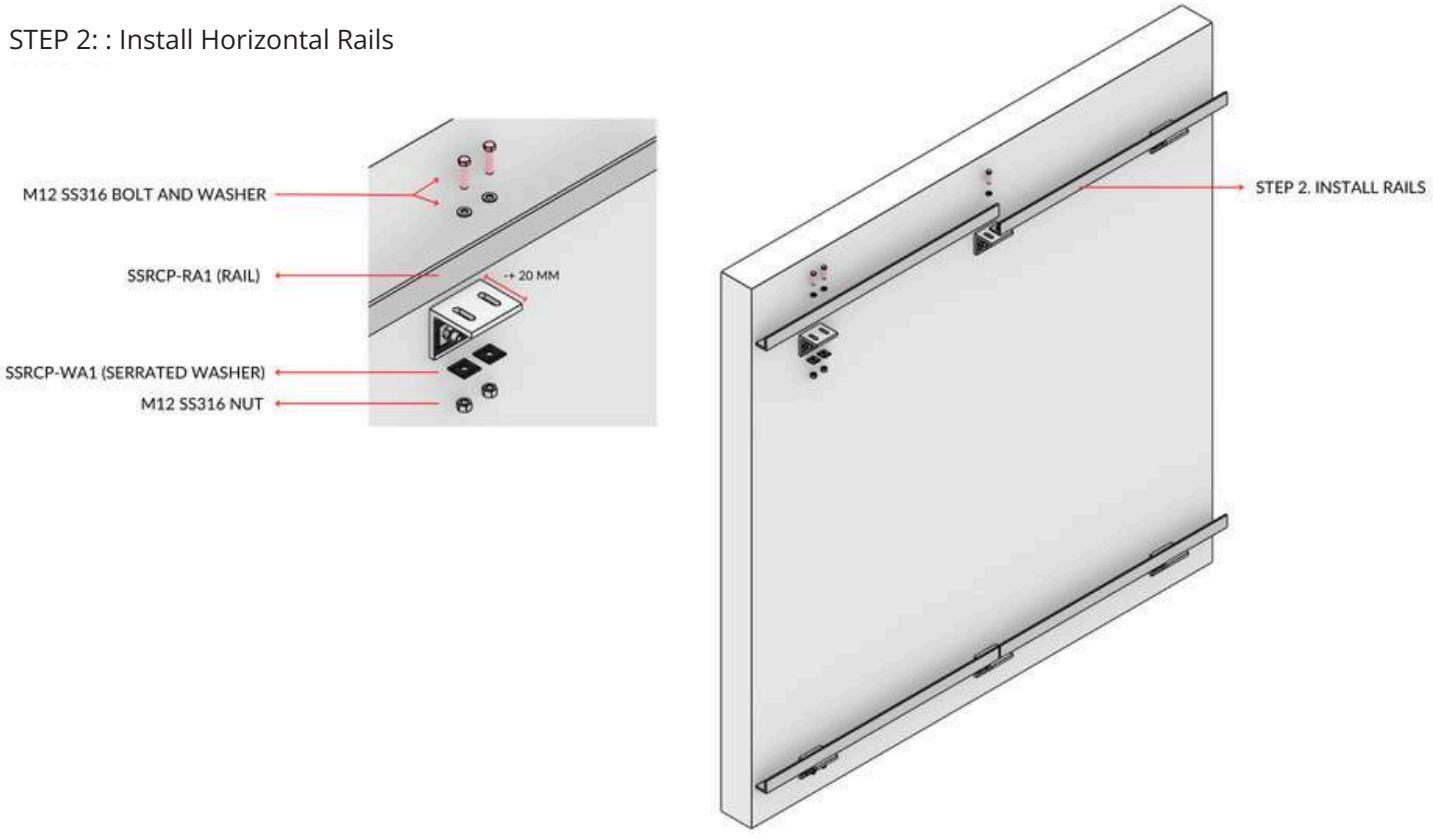
- Precision Adjustment: The system offers up to ±15mm of on-site adjustability, allowing for easy alignment to accommodate building tolerances. This flexibility helps minimise installation errors and ensures consistent alignment across large façade installations. Durability and Corrosion Resistance: Manufactured from Grade
- 316 (SS316) stainless steel, the attachments are highly corrosion-resistant, providing superior longevity even in challenging environments, such as coastal regions or high- pollution zones. This durability ensures a longer lifespan for the façade system, minimising ongoing maintenance requirements. Effective Load Transfer: The
- combination of deadload and windload brackets is specifically engineered to manage both vertical and lateral forces, providing exceptional stability under varied environmental conditions. This system ensures that panels remain securely anchored, delivering reliable performance throughout the building's lifecycle. Ease of Installation: The system features Tek screws and serrated adjustment plates that allow installers to quickly align and secure panels. The straightforward design
- reduces installation time, resulting in significant cost savings on labour and quicker project completion. Concealed Fixings for Enhanced Aesthetics: Concealed fixings are integral to the system, ensuring minimal visual impact of the hardware. This creates a clean, sophisticated look, allowing the focus to remain on the façade's
- architectural design and supporting the vision for seamless, uninterrupted surfaces. Versatile Compatibility: The system is designed for compatibility with both horizontal and vertical rail installations, making it adaptable to various building geometries and architectural styles. This versatility is ideal for architects and builders who need
- flexible solutions that do not compromise on performance or quality.

Panel Installation Guideline

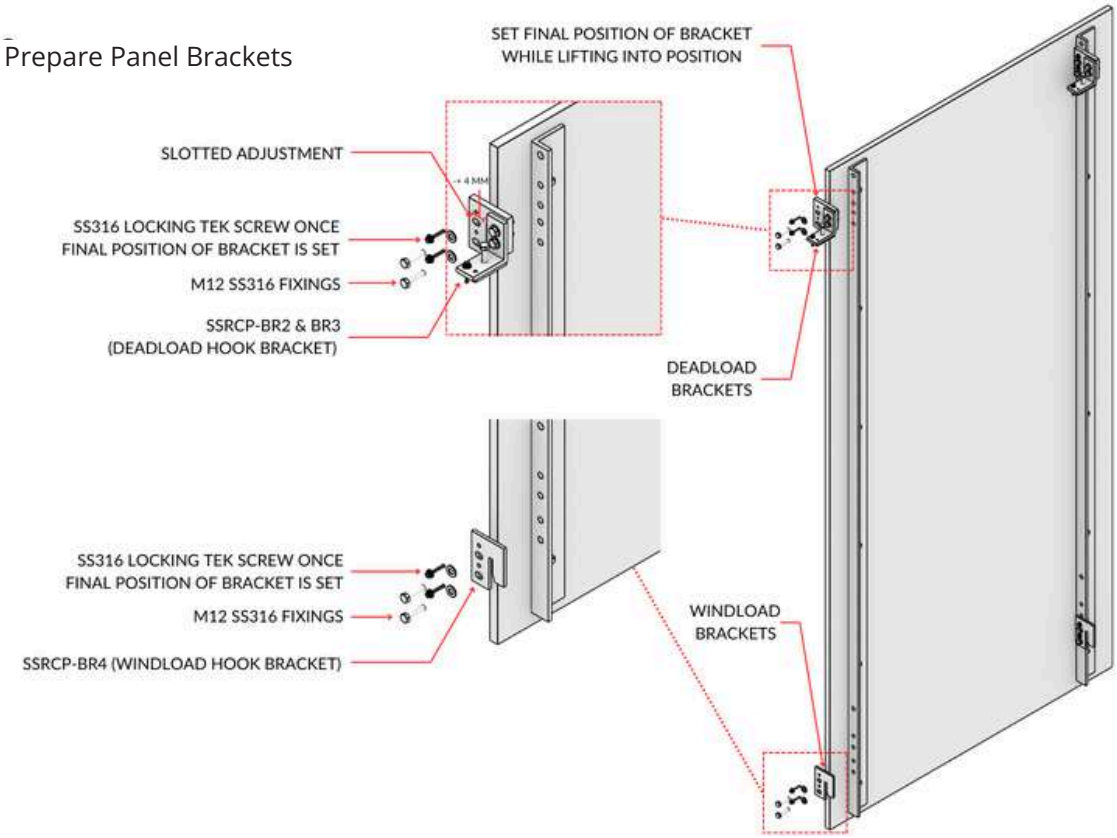
STEP 1: Position & Install Wall Brackets



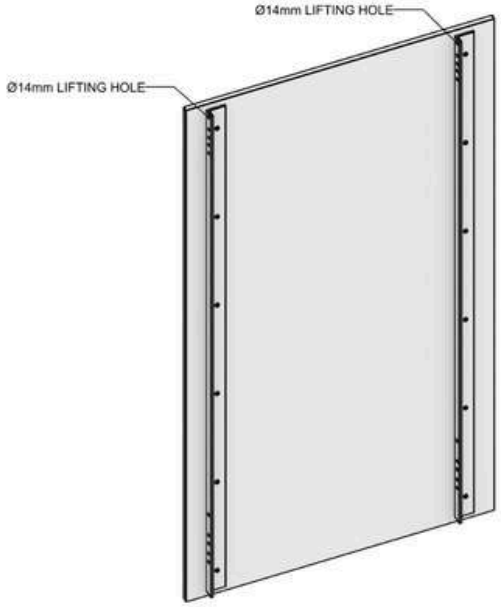
STEP 2: : Install Horizontal Rails

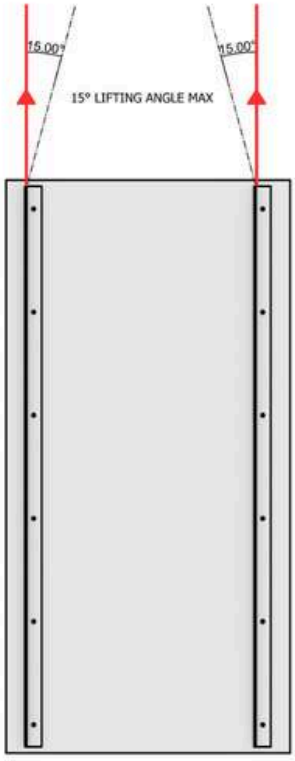


STEP 3: Prepare Panel Brackets

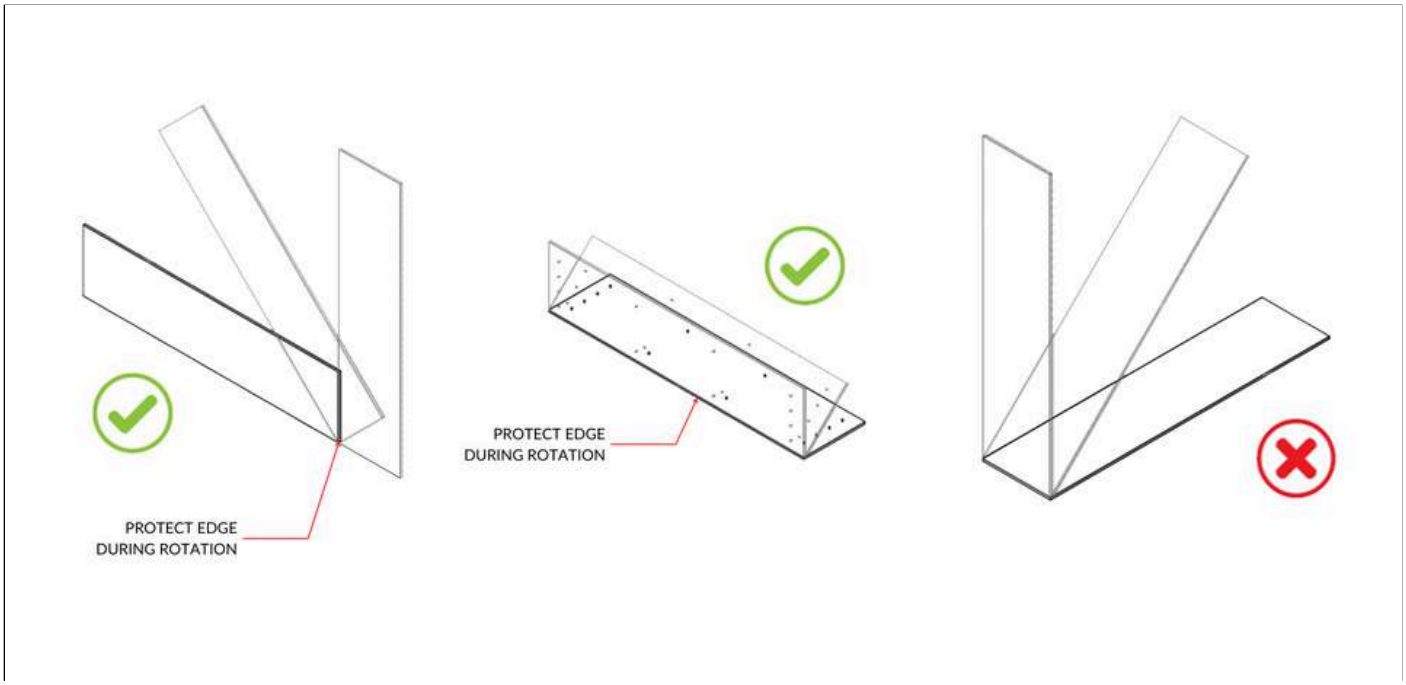


STEP 4: Lifting The Panels



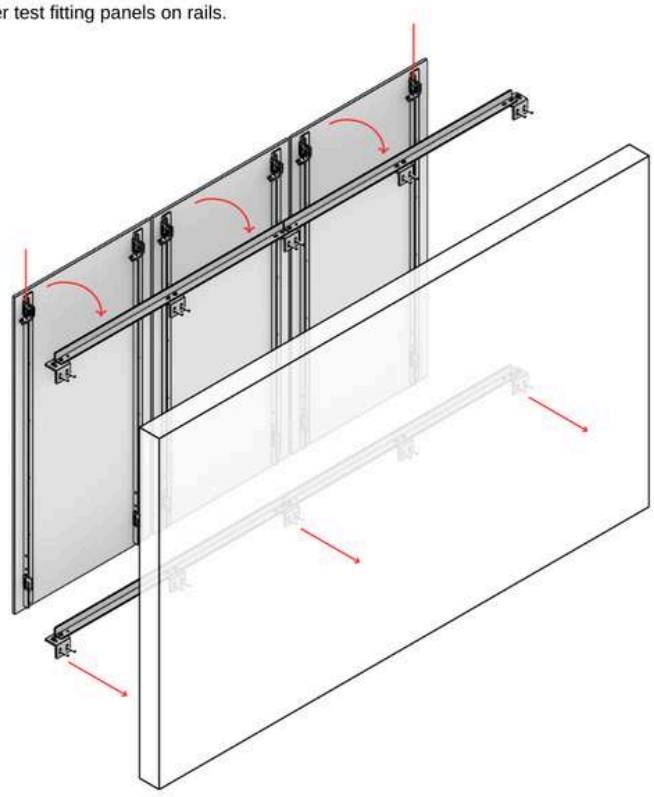


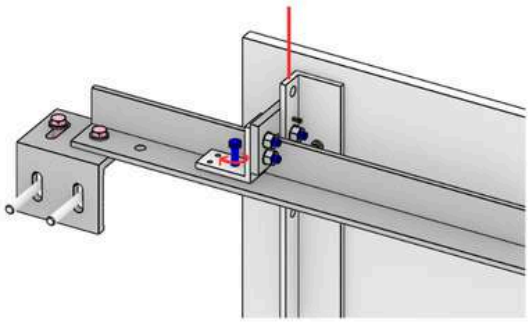
Safe Rotation & Panel Handling Guidelines

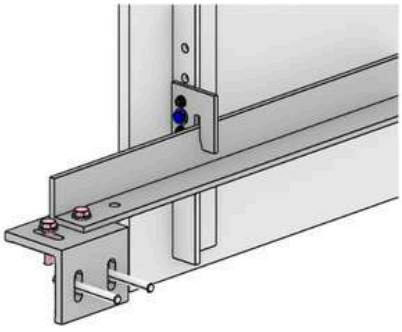


STEP 5: Install Panels into Rails

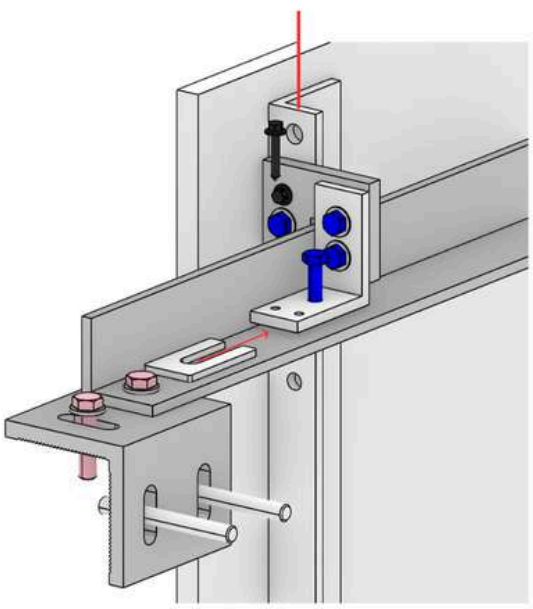
Panel Lifted into position. Tek screws are used to fix hook brackets to Aluminium panel rails after final adjustment. They can be installed before lifting the panel OR after test fitting panels on rails.



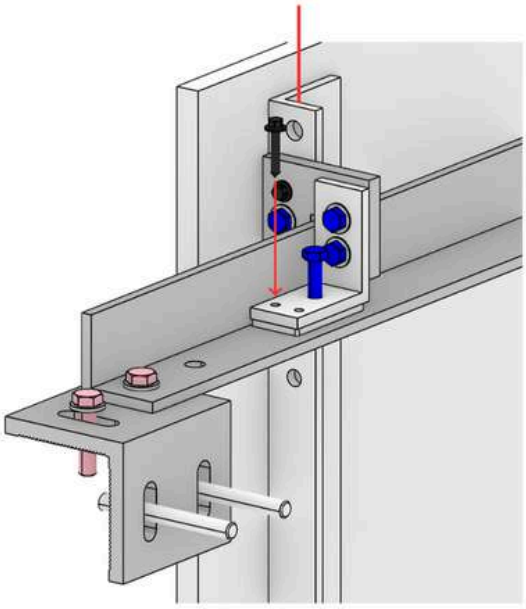




STEP 6: Adjust heights and lock off panels

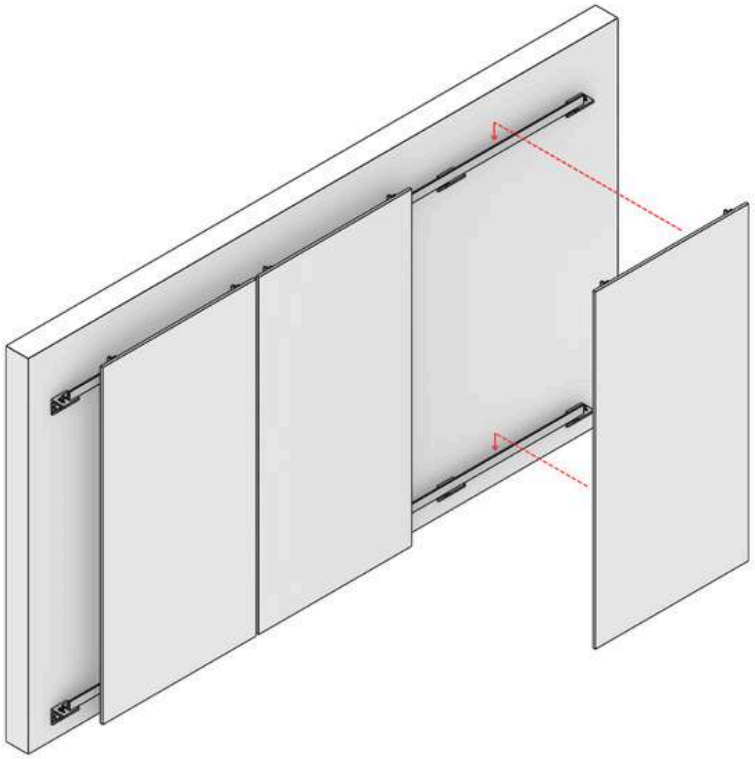


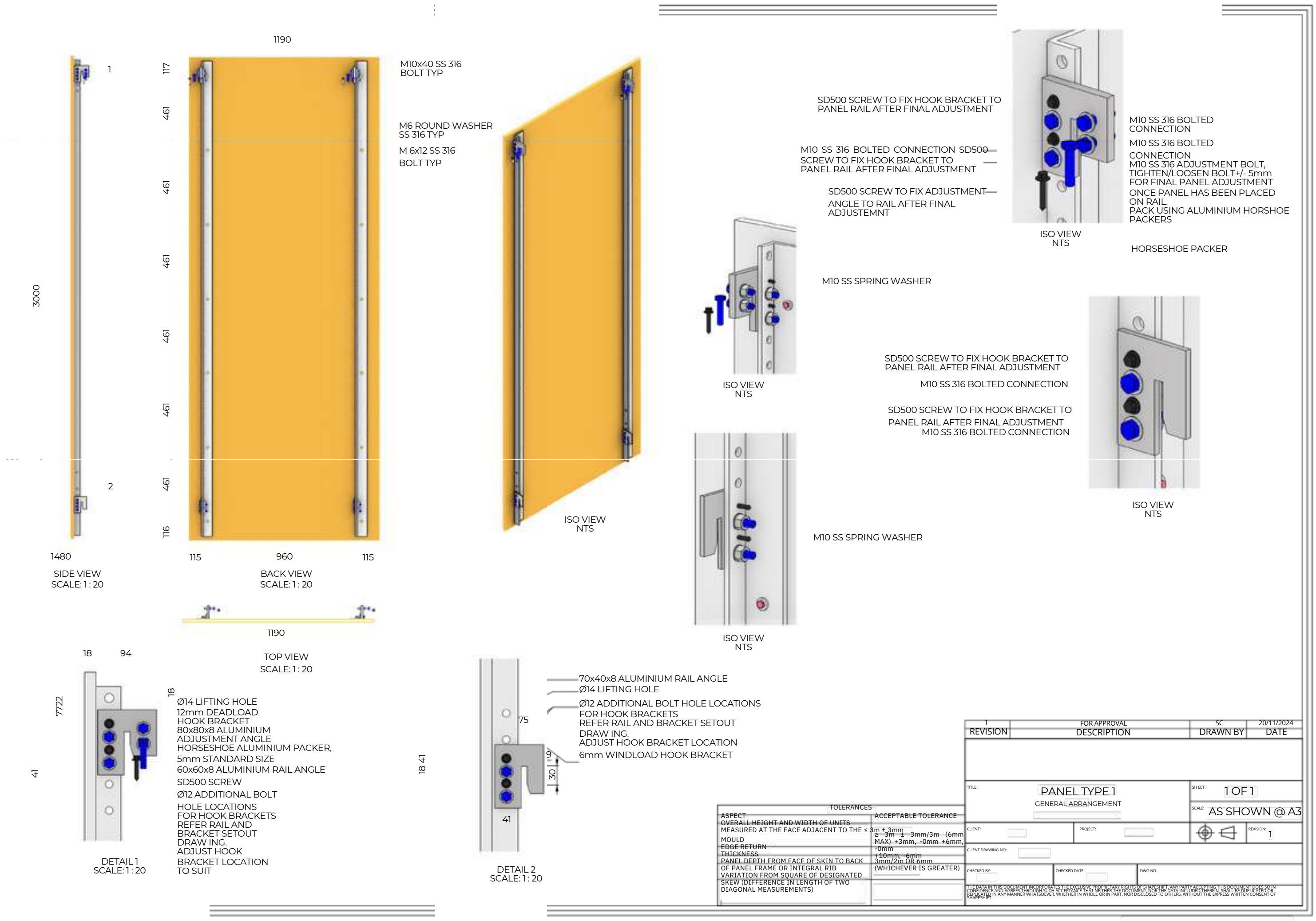
After Final Adjustment of panel, pack underneath adjustment angle using provided aluminium horseshoe packers.



Panel is then fixed into position using Tek screws.

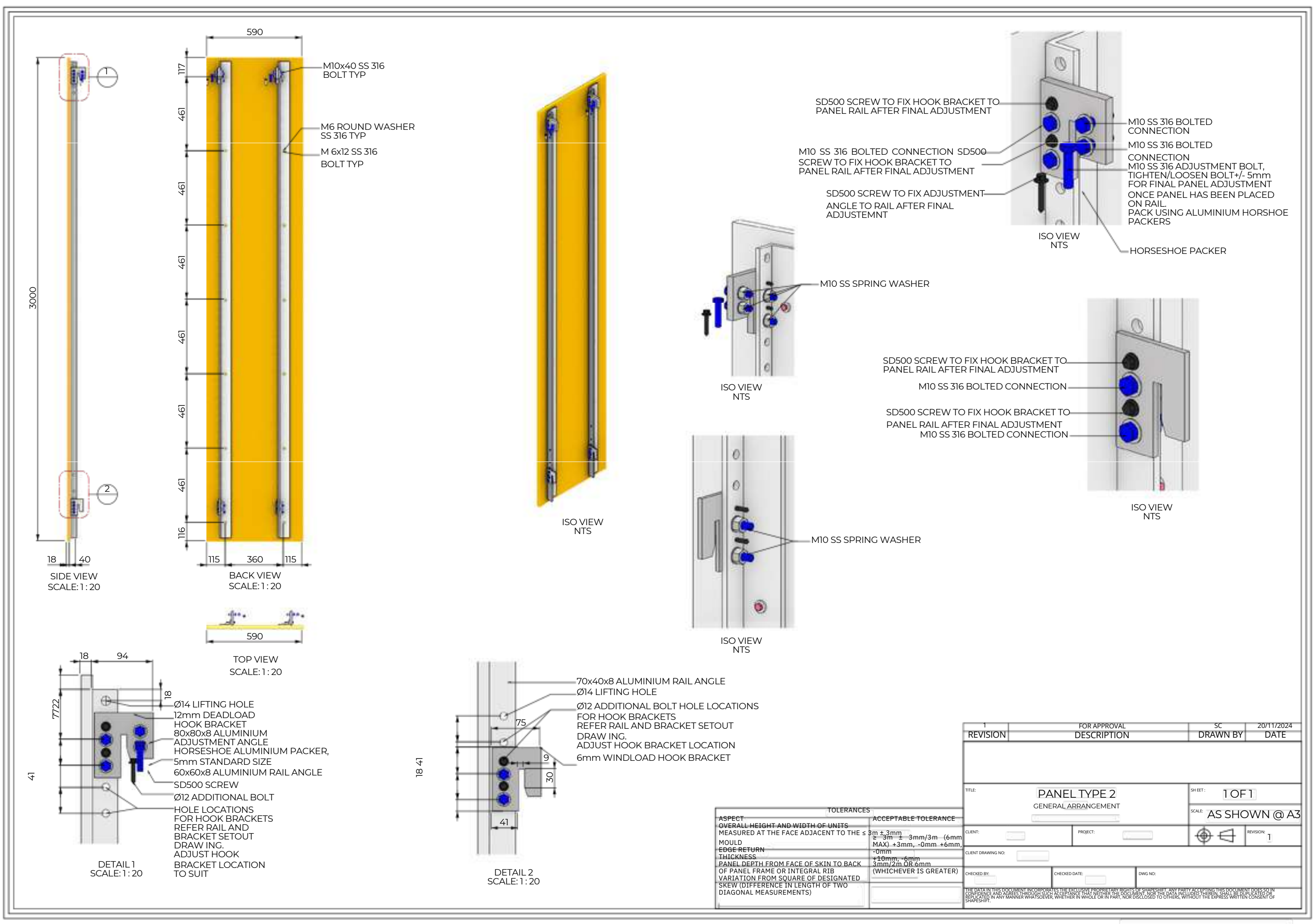
FINISHED INSTALLATION





TOLERANCES

ASPECT	ACCEPTABLE TOLERANCE
OVERALL HEIGHT AND WIDTH OF UNITS MEASURED AT THE FACE ADJACENT TO THE MOULD	≤ 3m ± 3mm; ≥ 3m ± 3mm/3m (6mm MAX)
EDGE RETURN THICKNESS	+3mm, -0mm
PANEL DEPTH FROM FACE OF SKIN TO BACK OF PANEL FRAME OR INTEGRAL RIB	+6mm, -0mm; +10mm, -6mm
VARIATION FROM SQUARE OF DESIGNATED SKEW (DIFFERENCE IN LENGTH OF TWO DIAGONAL MEASUREMENTS)	3mm/2m OR 6mm (WHICHEVER IS GREATER)



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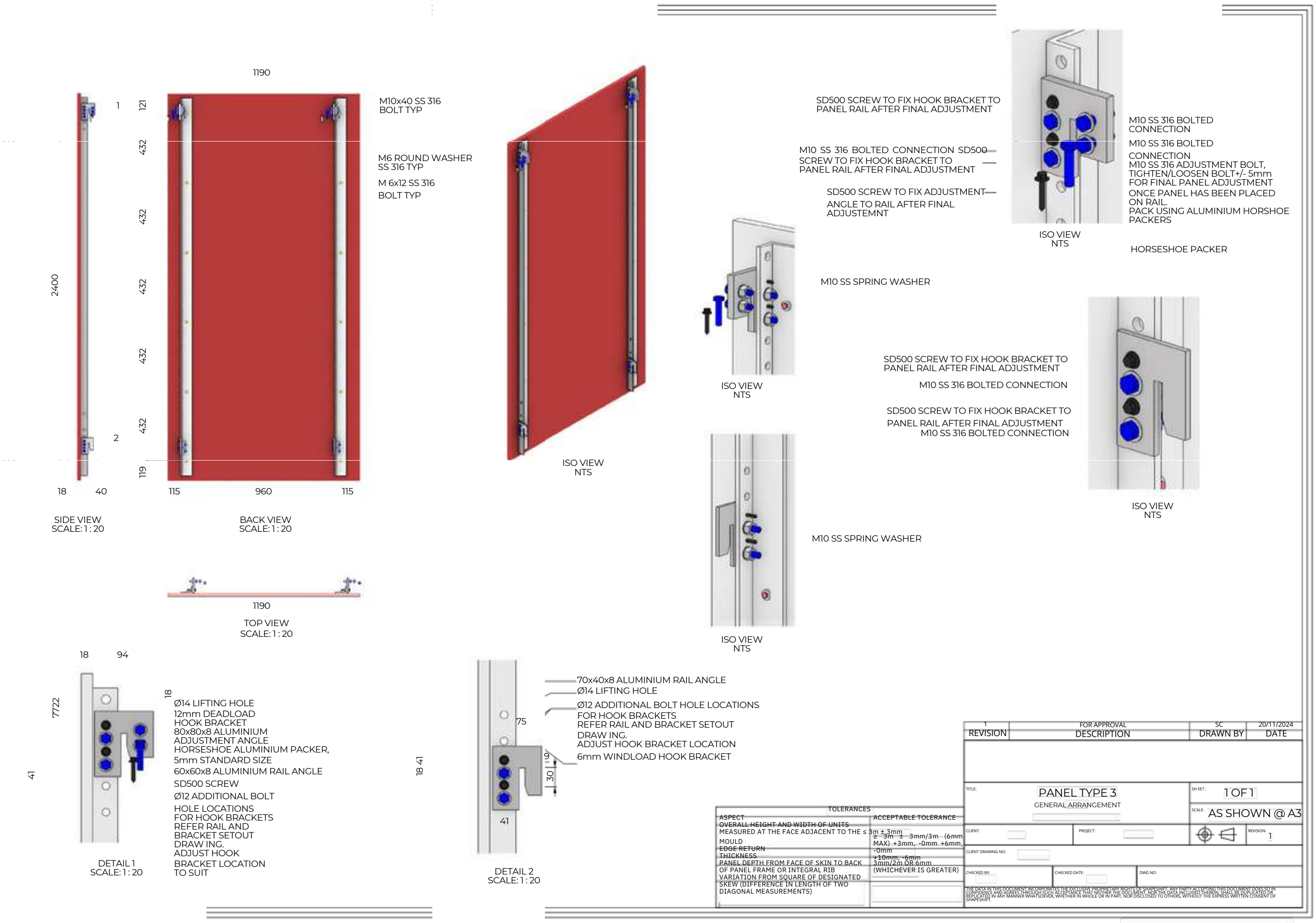
1190
M10x40 SS 316 BOLT TYP
M6 ROUND WASHER SS 316 TYP
M 6x12 SS 316 BOLT TYP
2400
121
432
432
432
432
432
119
18
40
115
960
115
SIDE VIEW SCALE: 1 : 20
BACK VIEW SCALE: 1 : 20
ISO VIEW NTS
1190
TOP VIEW SCALE: 1 : 20
SD500 SCREW TO FIX HOOK BRACKET TO PANEL RAIL AFTER FINAL ADJUSTMENT
M10 SS 316 BOLTED CONNECTION SD500 SCREW TO FIX HOOK BRACKET TO PANEL RAIL AFTER FINAL ADJUSTMENT
SD500 SCREW TO FIX ADJUSTMENT ANGLE TO RAIL AFTER FINAL ADJUSTEMNT
M10 SS 316 BOLTED CONNECTION
M10 SS 316 BOLTED CONNECTION
M10 SS 316 ADJUSTMENT BOLT, TIGHTEN/LOOSEN BOLT+/- 5mm FOR FINAL PANEL ADJUSTMENT ONCE PANEL HAS BEEN PLACED ON RAIL.
PACK USING ALUMINIUM HORSHOE PACKERS
HORSESHOE PACKER
M10 SS SPRING WASHER
SD500 SCREW TO FIX HOOK BRACKET TO PANEL RAIL AFTER FINAL ADJUSTMENT
M10 SS 316 BOLTED CONNECTION
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M10 SS 316 BOLTED CONNECTION
M10 SS SPRING WASHER
18
94
Ø14 LIFTING HOLE
12mm DEADLOAD HOOK BRACKET
80x80x8 ALUMINIUM ADJUSTMENT ANGLE
HORSESHOE ALUMINIUM PACKER, 5mm STANDARD SIZE
60x60x8 ALUMINIUM RAIL ANGLE
SD500 SCREW
Ø12 ADDITIONAL BOLT HOLE LOCATIONS FOR HOOK BRACKETS REFER RAIL AND BRACKET SETOUT DRAW ING.
ADJUST HOOK BRACKET LOCATION TO SUIT
DETAIL 1 SCALE: 1 : 20
70x40x8 ALUMINIUM RAIL ANGLE
Ø14 LIFTING HOLE
Ø12 ADDITIONAL BOLT HOLE LOCATIONS FOR HOOK BRACKETS REFER RAIL AND BRACKET SETOUT DRAW ING.
ADJUST HOOK BRACKET LOCATION
6mm WINDLOAD HOOK BRACKET
75
41
DETAIL 2 SCALE: 1 : 20
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(WHICHEVER IS GREATER)
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FOR APPROVAL
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REVISION
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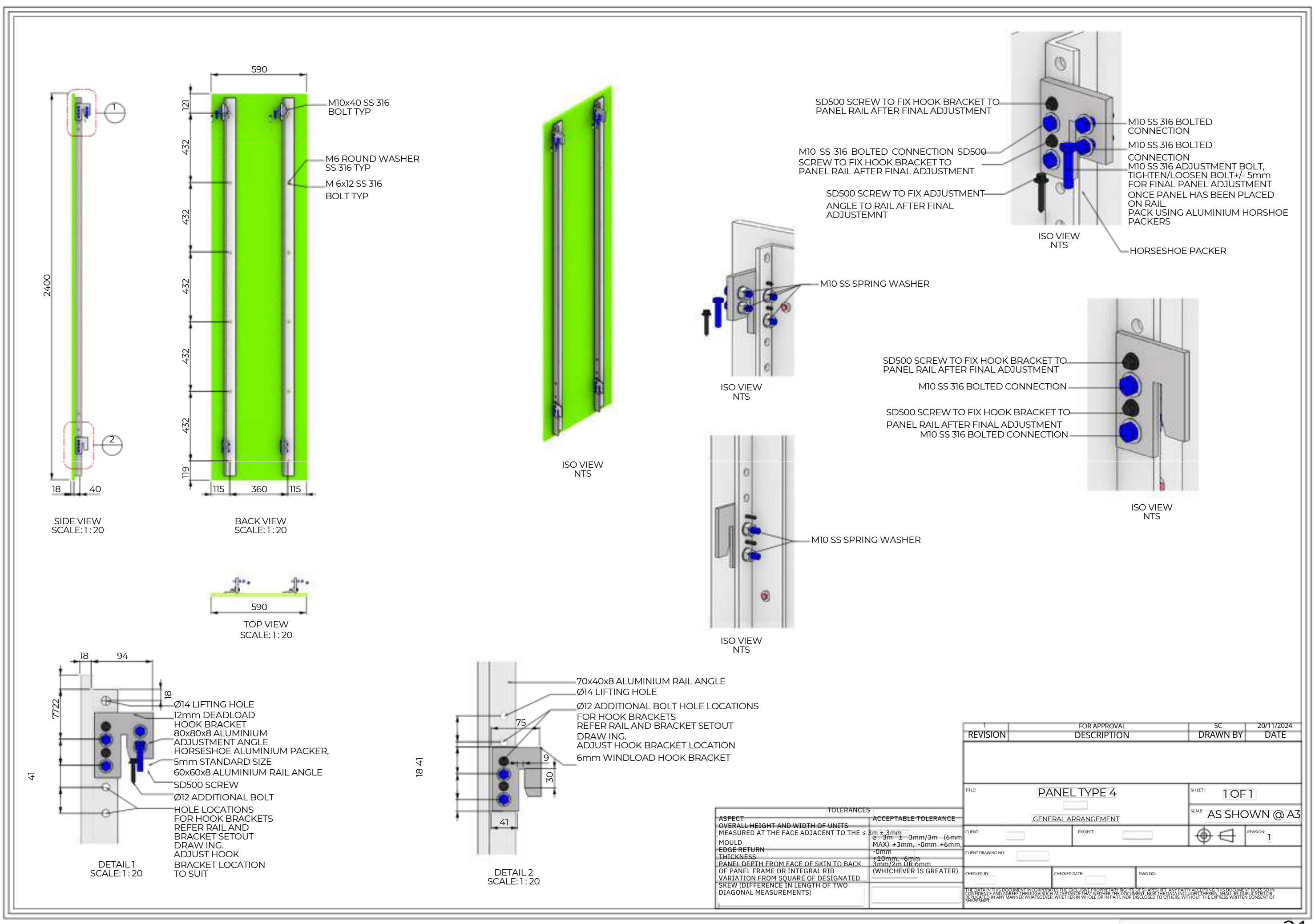
DRAWN BY
DATE
PANEL TYPE 3
GENERAL ARRANGEMENT
1 OF 1
AS SHOWN @ A3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FOR APPROVAL
SC
20/11/2024
REVISION
DESCRIPTION
DRAWN BY
DATE
PANEL TYPE 4
GENERAL ARRANGEMENT
1 OF 1
AS SHOWN @ A3

Project Showcase

Powerhouse Museum Parramatta
Parramatta, NSW

Architect : Genton
Builder : Lendlease
Application : Facade
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

Parramatta Public School

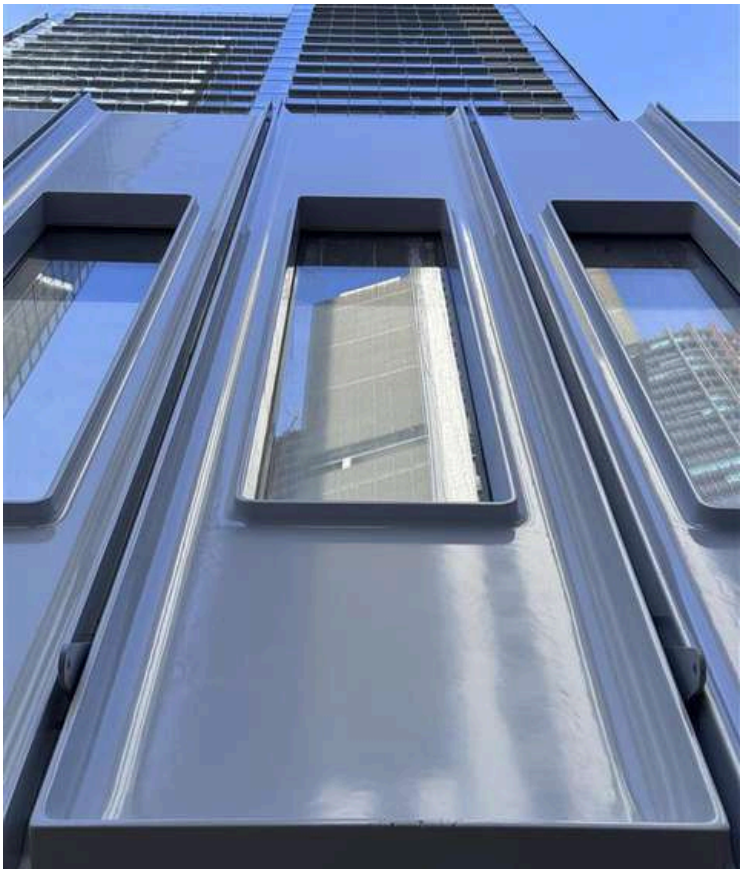
Parramatta, NSW

Architect: Grimshaw
Builder: Watpac
Application: Façade Panels
Building Surveyor: Veris / Total Surveying Solutions
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

One Sydney Harbour

Sydney, NSW

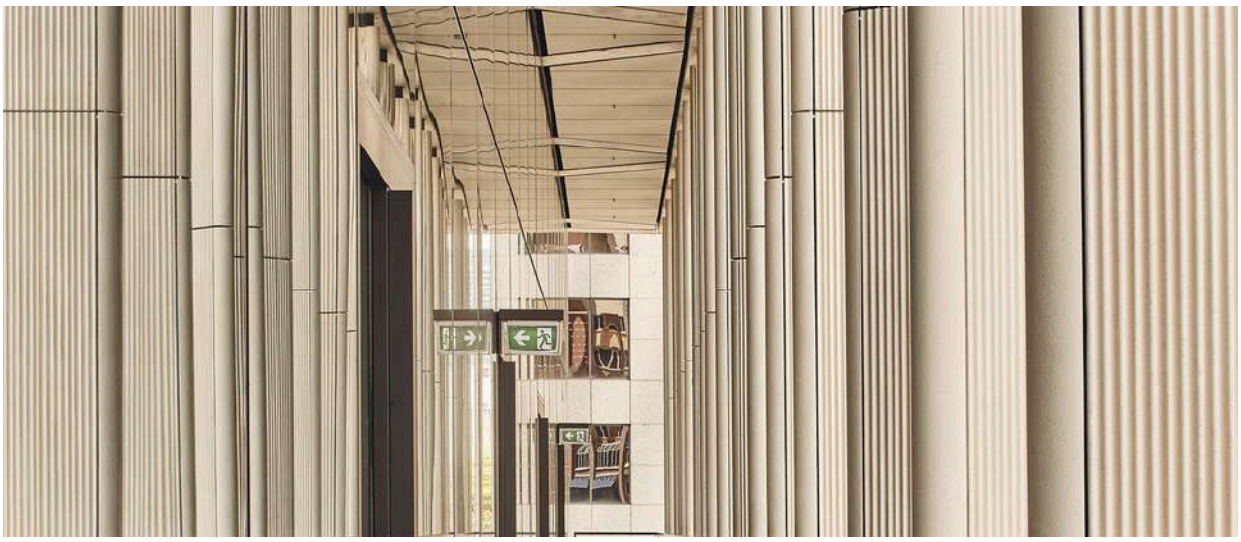
Architect: Renzo Piano
Builder: Lendlease
Application: Façade panels (72 floors)
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

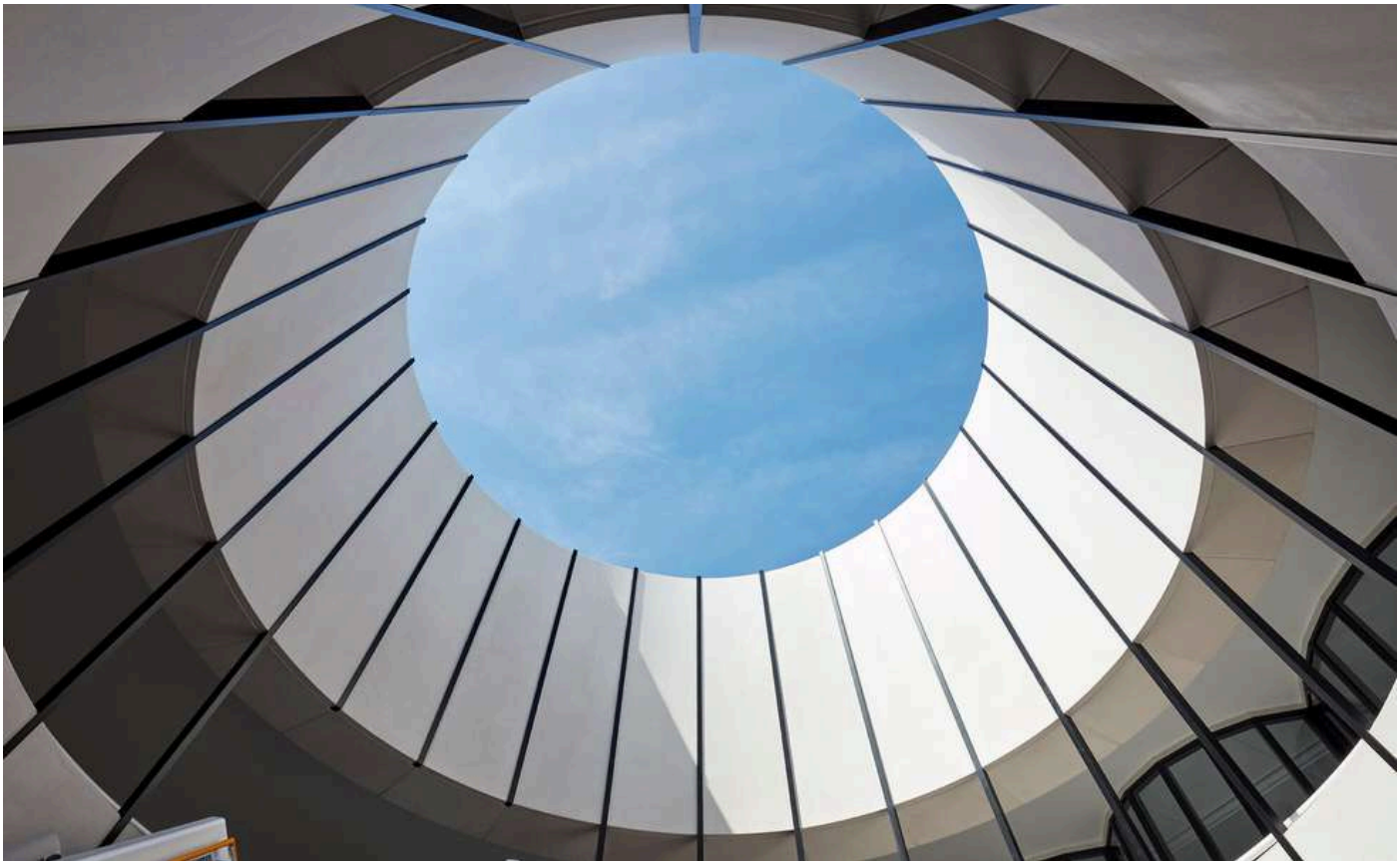


Polycentre

Sydney, NSW

Architect: Grimshaw Architects
Builder: Watpac
Application: Blades spanning two floors (circa 1,200 m2)
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

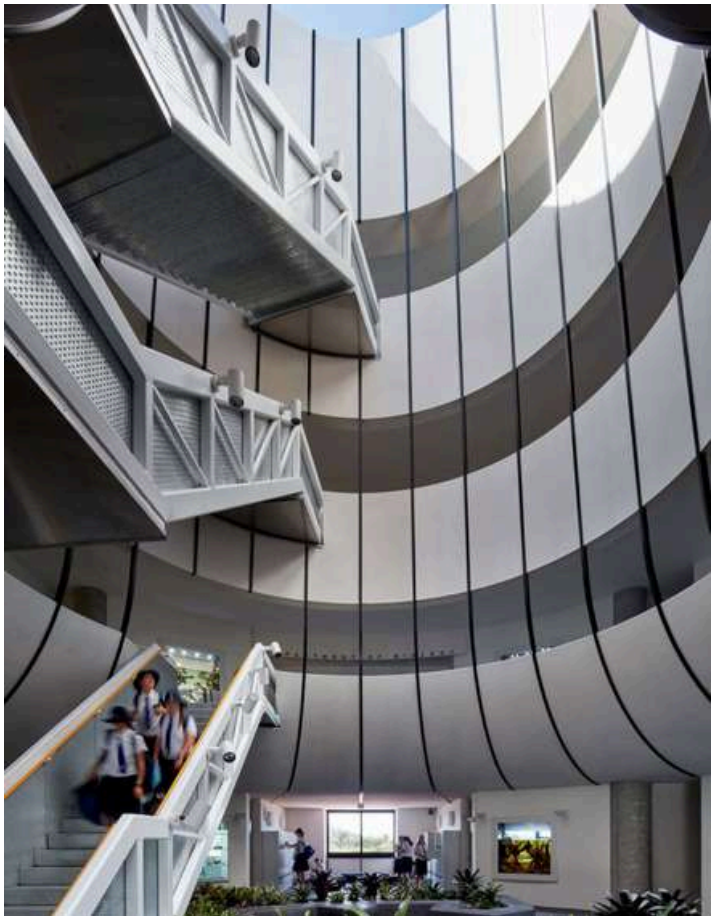




Brisbane Girls Grammar Science Learning Centre

Brisbane, QLD

Architect: M3architecture
Builder: Lendlease
Application: Central Void & Soffit Panels (over 100 double curvature panels)
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel



Victorian Pride Centre

St. Kilda, VIC

Architect: BAU
Builder: Hansen Yuncken
Application: Roof Vaults
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

Marvel Stadium

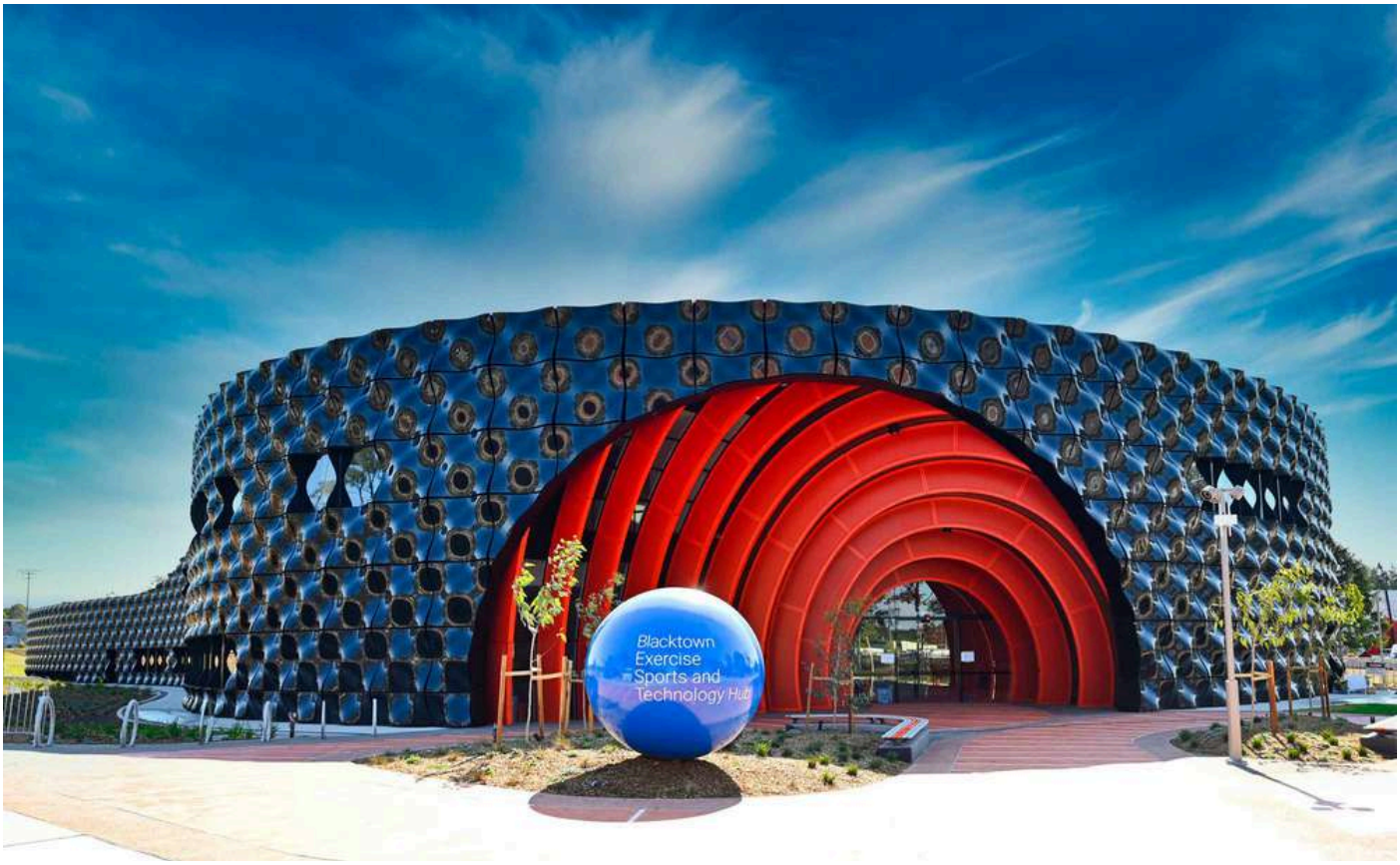
Melbourne, VIC

Architect: GRIMSHAW Architects
Builder / Contractor: John Holland
Façade Engineer: Aurecon
Application : Facade (226 panels)
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel

Blacktown Exercise Sports and Technology Hub

Rooty Hill, NSW

Architect : ARM
Builder : Buildcorp
Application : Facade
Responsibility: Design, engineer & manufacture of ShapeShell™-RC facade panel



Contact Us

Get in touch today to explore partnership opportunities.

Experienced Global Team, Reliable Partner Assurance

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https://shapeshift.tech/

SHAPESHIFT TECHNOLOGIES

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