

# Panel Brick

—  
Product Collection



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A BRAND OF

**BRICKWORKS**



Panel Brick

—

Beautifully  
fast








# The Benefits


Panel Brick is a revolutionary product that combines the simplicity and ease of precast concrete with the timeless beauty and style of brick. Elevating brick to new heights, Panel Brick allows brick to go where it has never gone before.


Here's what makes Panel Brick so unique:


- 


**Build faster**  
Buildings are built faster with the rapid construction of prefabricated brick panels.
- 


**Build higher**  
Panel Brick allows brick construction to go higher with strong resistance to wind and earthquake forces.
- 


**Extensive colour range**  
Creativity and colour variety. A wide selection of clay bricks from the Austral Bricks range are available for use with Panel Brick.
- 


**Design flexibility**  
Panels are available in shapes and sizes to suit unique designs.
- 


**Outstanding performance**  
Strong and durable, Panel Brick offers outstanding thermal insulation, non-combustibility, fire, earthquake and weather resistance.
- 


**Less waste**  
Off-site manufacturing means no waste on-site.
- 

**Outstanding quality**  
High precision and consistent quality from a factory-made product.
- 

**Minimal risk**  
Minimises labour, loose materials and storage on-site.
- 

**Load-bearing**  
Ability to integrate panels as load-bearing structural elements of the project.
- 

**Suitable for challenging sites**  
Allows for construction on boundaries with limited external access.
- 

**Cost saving**  
Eliminates need for expensive scaffolding creating a cleaner and safer worksite.
- 

**Cleaner worksite**  
No broken bricks or mortar mess on-site. Panel Brick removes the need for on-site brick cleaning.

# Our Panels



Panel Brick is the ideal building solution for medium and high density residential projects, industrial and commercial building and contemporary infrastructure. This innovative product offers a high quality, long-lasting finish with low maintenance, and outstanding thermal performance.

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## The fastest way to build in brick

Create internal and external walls with a low maintenance finish, high resistance to wind and earthquake loads, and superior thermal performance with Panel Brick. This cost-effective walling system can be used in load-bearing and non load-bearing applications for facades, cladding or structural elements, creating a brick finish that is designed to last the test of time.

Prefabrication enables precision manufacturing to suit the construction process and thereby ensures greater efficiency in installation. Panel Brick connections are the same as traditional precast panels, with a variety of fixing methods available to suit your design.

- The system is ideally suited for:
- Medium Density Multi-Residential Buildings
  - High-Rise Buildings
  - Industrial Building Units and Warehouses
  - Commercial Buildings
  - Schools
  - Hospitals

For design and architectural purposes, Panel Brick can be treated as a precast panel which is ideally suited for construction of straight, flat walls laid in linear configurations. Panel Brick can be self-supported, supported on slab edges or structurally integrated into a building with brick elements cast in on one side of the panel only.











# Selection

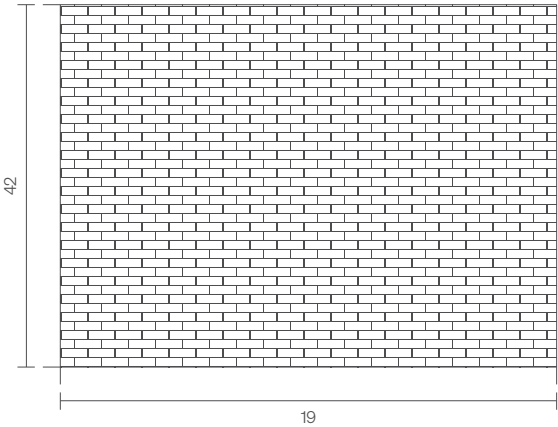


Panel Brick is available in ‘Standard’ and ‘Custom’ options with specific colour ranges and sizes associated with each.

## Standard Panel Brick

|                    |   |
|--------------------|---|
| Fabrication        | Laid by robot   |
| Colour Range       | Bowral 76<br>Burlesque<br>Metallix  |
| Panel Size (m)     | Maximum Length: 4.5<br>Maximum Height: 3.6  |
| Form               | Flat  |
| Thickness (mm)     | 110, 125, 150, 200  |
| Double Wall Panels | Maximum Length: 4.5m<br>Maximum Height: 3.4m<br>External Skin: 110mm<br>Internal Skin: 70mm<br>Minimum Cavity: 60mm |

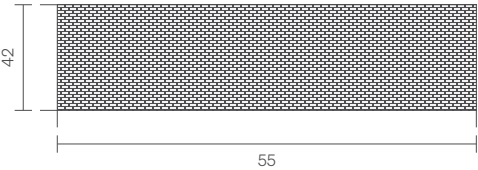
Maximum Standard Panel Brick \*  
Horizontal only



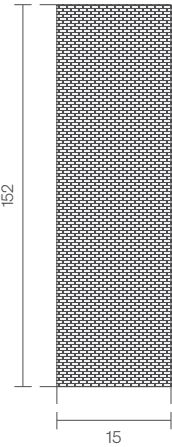
## Custom Panel Brick

|                    |  |
|--------------------|--|
| Fabrication        | Laid by hand   |
| Colour Range       | San Selmo<br>La Paloma<br>Bowral 50  |
| Panel Size (m)     | Maximum Length: 12<br>Maximum Height: 3.6  |
| Form               | Custom   |
| Thickness (mm)     | Minimum: 110   |
| Double Wall Panels | Maximum Length: 12m<br>Maximum Height: 3.6m<br>Maximum Panel Size: 26m²<br>External Skin: 110mm<br>Internal Skin: 70mm<br>Minimum Cavity: 60mm |

Maximum Custom Panel Brick \*  
Horizontal



Vertical



\* Standard brick coursing with 10mm joints



# Panel Types



Panel Brick can be used as cladding, for facades, and as structural, load-bearing panels.



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## Cladding Panels



Panel Brick cladding panels are designed as a non load-bearing brick external walling system.

Cladding panels utilise a purely mechanical bracket fixing system engineered specifically for Panel Brick. Panels are typically 110mm or 125mm thick and are ideal for buildings where external access is limited.

## Facade Panels



Panel Brick facade panels are designed as a load-bearing brick external wall system.

Panels are typically 150mm to 250mm thick depending on service load requirements. Panel Brick facades panels can be created with openings such as windows and doors. These panels do not contribute to the structural frame of the building.

## Structural Panels



Panel Brick structural panels are ideal for integrating external column sections into the building with no interruption to the external brick facade.

Structural panels utilise traditional precast connection methods of grout tubes, starter bars, slab rebates and key boxes for connecting to the building structure. Panels are typically 250mm thick or greater.



# Design Considerations



When designing with Panel Brick, there are a range of considerations that must be factored in to maximise the benefits that can be achieved.

|   |   |   |  |
|---|---|---|--|
| <b>1.</b>   | <b>2.</b>   | <b>3.</b>   | <b>4.</b>  |
| <b>Design to brick sizes</b><br>Careful consideration must be made when designing in Panel Brick to integrate brick sizes and mortar joints into the details of each building.<br><br>Wall lengths, window and other panel void sizes, wall heights and panel joints must be designed to suit the brick size and mortar joints. Cost, manufacturing, installation time and aesthetic can all be greatly affected by the integration of brick unit sizing into the building design. Please work with the Austral Precast team who can assist to ensure the panel sizes, design and manufacturing efficiencies are optimised. | <b>Design for precast panels</b><br>Designing in precast requires special care around panel sizes and shapes to maximise efficiencies in cost, manufacturing and construction.<br><br>Smaller panels increase manufacturing and installation cost relative to area. Avoid unnecessarily small panel sections where possible.<br><br>Slender sections of panel around voids are difficult and expensive to reinforce. Panel voids should be located close to the centre of the panel where possible.<br><br>The panel support mechanism needs to be considered in the initial design as it may rely on a cantilevered or footing slab for support. | <b>Consider installation</b><br>Installation of Panel Brick requires a crane and access to the panels. Panels should be designed to accommodate the lifting capacity of the crane at the radius required.<br><br>Panels higher than 3.5m will need to be spun 90 degrees to be unloaded and installed. This process requires a second crane and additional installation time. Spinning panels also introduces additional risk of damaging the product during install. | <b>Construction sequencing</b><br>Panel Brick can play a key role in optimising the construction sequence of a building.<br><br>Panel Brick can be installed as the building slabs are being poured, allowing for slabs to be cast directly into panel connections. This allows Panel Brick to be integrated into the structural frame of the building, while also providing immediate weather protection.<br><br>Panels can also be installed directly onto suspended slabs with shelf angles or brackets for support. These panels can be sequenced around crane availability and rely on purely mechanical connections for support. |



# Design Loads

The structural requirements of Panel Brick, and any other building element, must be calculated on a case-by-case basis using the specific details of each element, its location within the building and the building’s location with respect to its surroundings.

## Cladding Panels

These charts show an approximation of the maximum panel size achievable, while resisting the ultimate wind pressure for different building heights and wind categories.

Many assumptions have been made about building location and proximity to both natural and man-made surroundings in the calculations for this table, and no considerations have been made for elevated wind pressures at building corners or for voids in panels. As such, this chart should be used as an indication only for the maximum panel sizes for a building.

Panel – 110mm thickness x 3.2m high

| Wind Region          | Region A |     |     |      |     |     | Region B |     |     |      |     |     |
|----------------------|----------|-----|-----|------|-----|-----|----------|-----|-----|------|-----|-----|
| Terrain Category     | TC3      |     |     | TC1  |     |     | TC3      |     |     | TC1  |     |     |
| Building Height (m)  | 10       | 20  | 50  | 10   | 20  | 50  | 10       | 20  | 50  | 10   | 20  | 50  |
| Panel Mesh           | SL82     |     |     | SL82 |     |     | SL82     |     |     | SL82 |     |     |
| Panel Thickness (mm) | 110      |     |     | 110  |     |     | 110      |     |     | 110  |     |     |
| Panel Height (m)     | 3.2      |     |     | 3.2  |     |     | 3.2      |     |     | 3.2  |     |     |
| Panel Width (m)      | 8.7      | 8.7 | 8.7 | 8.7  | 8.6 | 7.8 | 8.7      | 8.6 | 6.6 | 6    | 5.3 | 4.8 |

Panel – 125mm thickness x 3.2m high

| Wind Region          | Region A |      |      |      |      |      | Region B |      |     |      |     |     |
|----------------------|----------|------|------|------|------|------|----------|------|-----|------|-----|-----|
| Terrain Category     | TC3      |      |      | TC1  |      |      | TC3      |      |     | TC1  |     |     |
| Building Height (m)  | 10       | 20   | 50   | 10   | 20   | 50   | 10       | 20   | 50  | 10   | 20  | 50  |
| Panel Mesh           | SL92     |      |      | SL92 |      |      | SL92     |      |     | SL92 |     |     |
| Panel Thickness (mm) | 125      |      |      | 125  |      |      | 125      |      |     | 125  |     |     |
| Panel Height (m)     | 3.2      |      |      | 3.2  |      |      | 3.2      |      |     | 3.2  |     |     |
| Panel Width (m)      | 10.9     | 10.9 | 10.9 | 10.9 | 10.9 | 10.4 | 10.9     | 10.9 | 8.8 | 8    | 7.1 | 6.4 |

# Components

—

Panel Brick uses a range of Dovetail Brick Facings in each panel.

## Full Brick Facing

—

The standard brick facing used for Panel Brick.

Front



Back



## Full Brick Corner

—

Applied at corners and panel edges.

Front



Back



## Half Brick Facing

—

Used at panel edges or in the body of the wall to create an interesting bond pattern.

Front



Back



## Half Brick Corner

—

Applied at corner or panel edges.

Front



Back





# The Panel Brick System

Our Registered Dovetail brick design maximises the mechanical bond between the brick and the precast panel. The Dovetail design allows you to build higher with confidence.

## Dovetail Bricks

Extensive testing of the brick’s pull-out strength has been performed under standard and freeze-thaw conditions to ensure compliance with Australian and International Building Standards. When it comes to brick-in-concrete construction, there is no better option than the Austral Bricks Dovetail Brick.

Choose from a variety of bricks from the Austral Bricks range, including dry pressed Bowral bricks, Punchbowl glazed bricks, La Paloma bricks and San Selmo.

### Design Registrations

#### Australia

201911536, 201911537,  
201911538, 201911539

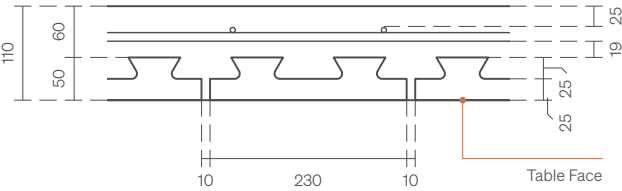
#### New Zealand

425978, 425979,  
425980, 425981

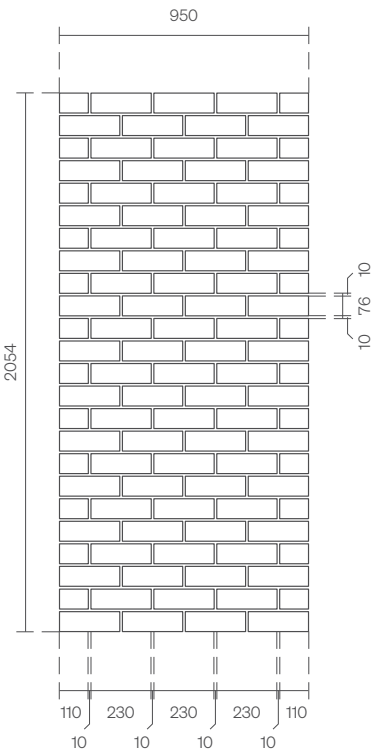
#### US

29700880, 29700881,  
29700882, 29700883

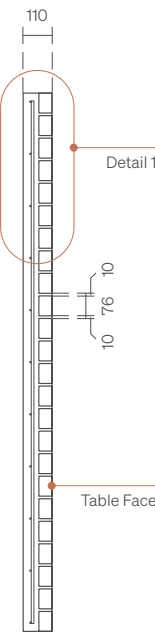
Top View



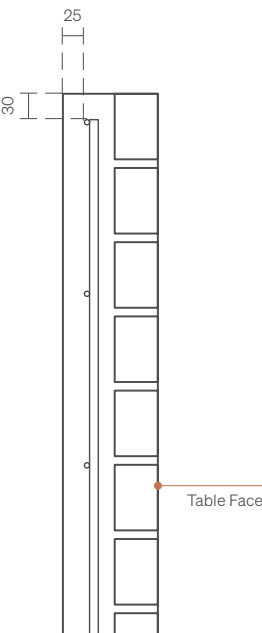
Panel Brick Elevation



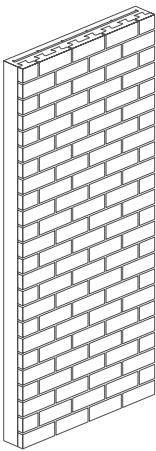
Section

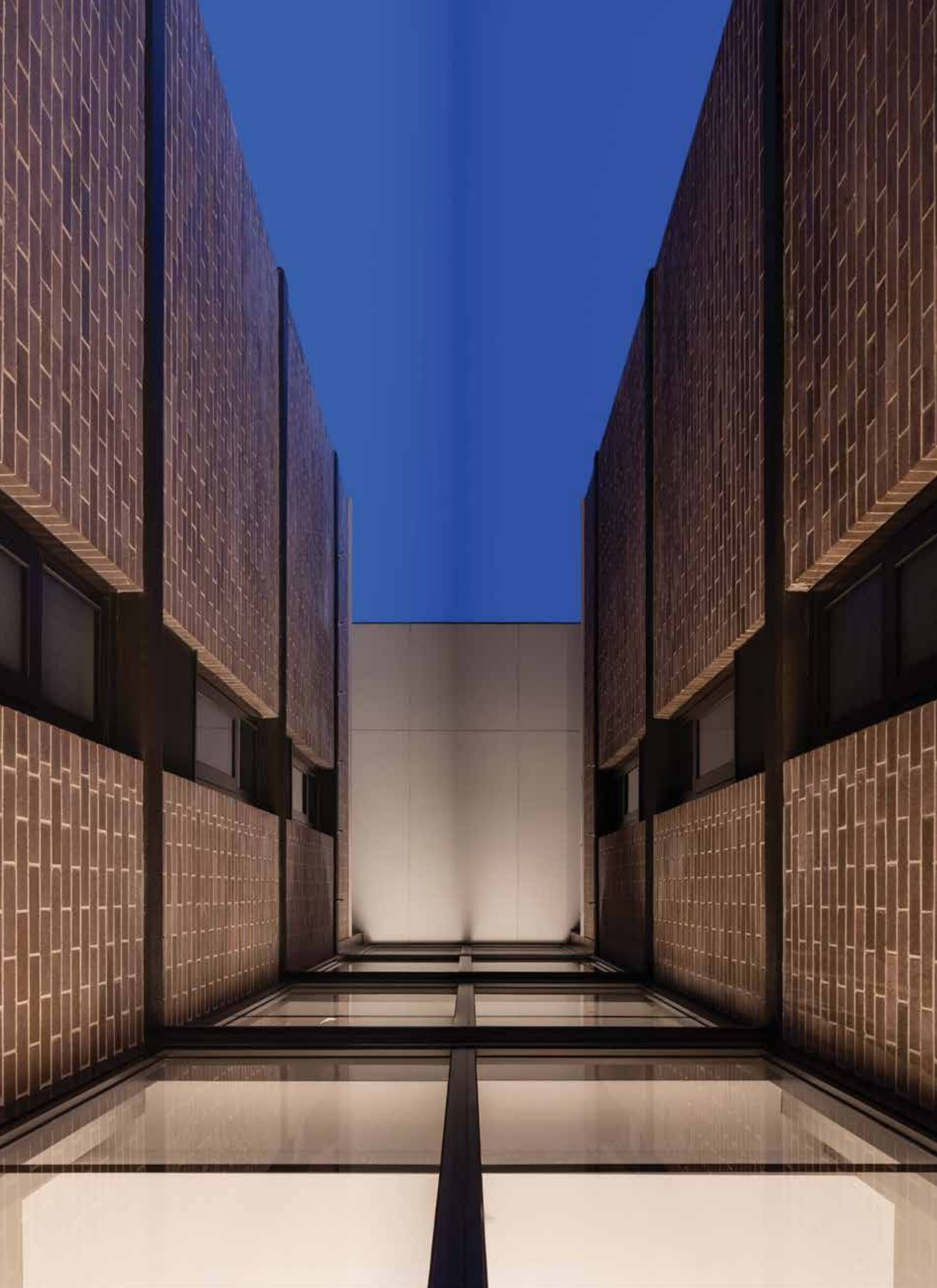


Detail 1

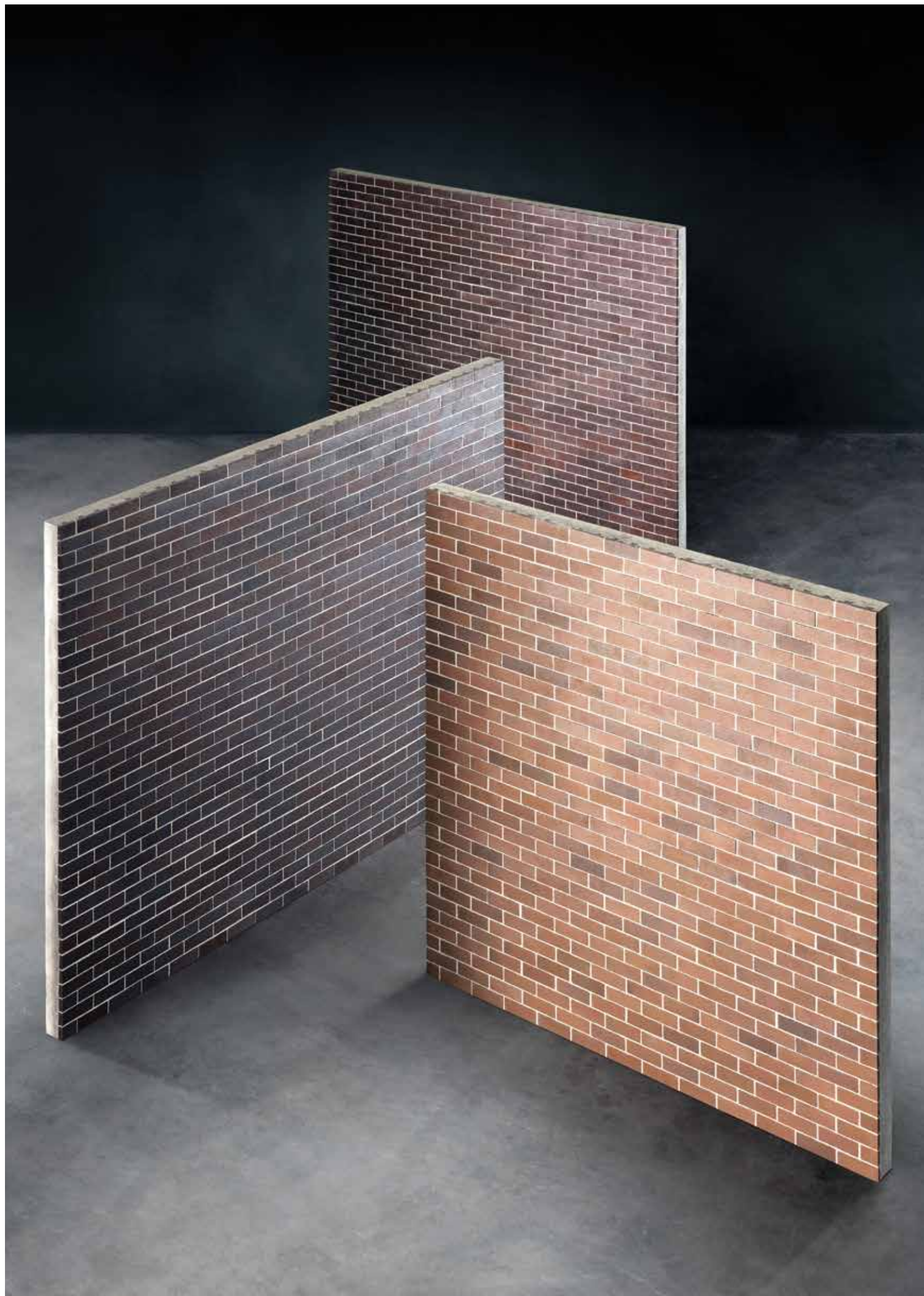


Perspective









## Our Range

–

Select from a huge range of colours and finishes to create striking building facades using Panel Brick.

- Metallix
- La Paloma
- San Selmo
- Burlesque Glazed
- Bowral 50 & 76



**Metallix**

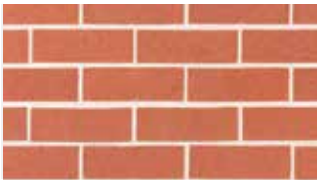
A brick face that glimmers, sparks immediate interest and which possesses great subtlety. With its depth of colour, the Metallix range reflects light on finished brickwork, creating a satin metallic sheen that will lend depth and sophistication to your project.



**Colours**



Cuprum



Cherry Soda



Platinum



Titanium



Bronze



Blackstone



Lithium

## La Paloma

Spain – confident, creative and the artistry of Dali, Picasso, Miró, which give inspiration to the soft white and charcoal black bricks of La Paloma. Characterful, eye-catching and steeped in heritage, they express two striking colours found in the spectrum of fired clay colours, transforming buildings into works of art.



### Colours



Castellana



Miro



Azul



Romero



## San Selmo

Italy – inspired, rustic and charming. The unique San Selmo range of Reclaimed and Smoked embodies the beauty of brick. With hues that transition from light to dark, tactile finishes, and sizes from conventional to distinctive, the San Selmo range suits all contemporary projects and environments.



### Reclaimed Range

Colours



Lime Wash



Original



Aged Red

### Smoked Range

Colours



Grey Cashmere



Opaque Slate

**Burlesque Glazed**

Making a statement – and the provocative, eye-catching Burlesque range – go together when it comes to design. Burlesque’s fully glazed finish speaks volumes about this sensuous collection. Available in modern tones, the Burlesque range will appeal to the adventurous spirit.



**Colours**



Indulgent White



Majestic Grey



Karrington Silver



Brushed Leather



Oyster Grey



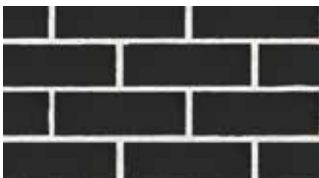
Cognac Illusion



Sublime Steel



Smashing Blue



Charming Black



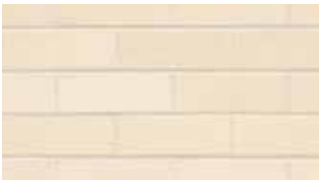
# Bowral 50 & 76 Dry Pressed Bricks

These distinctive dry pressed bricks made at our Bowral plant have been used in many of Australia’s most admired and historic buildings. With their unique granular patina and tactile aesthetic, Bowral bricks are highly prized by customers, architects and designers alike, and set the standard for design and integrity.



BOWRAL BRICKS

## Colours



Chillingham White



Simmental Silver



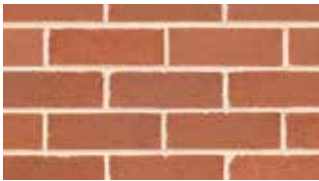
St. Pauls Cream



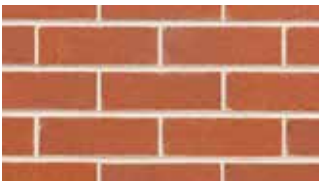
Murray Grey



Hereford Bronze



Capitol Red



Embassy Red



Shorthorn Mix



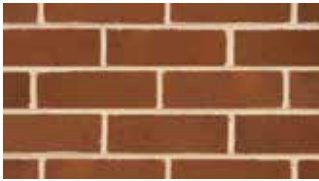
Limousin Gold



Bowral Brown



Renovation Gertrudis Brown



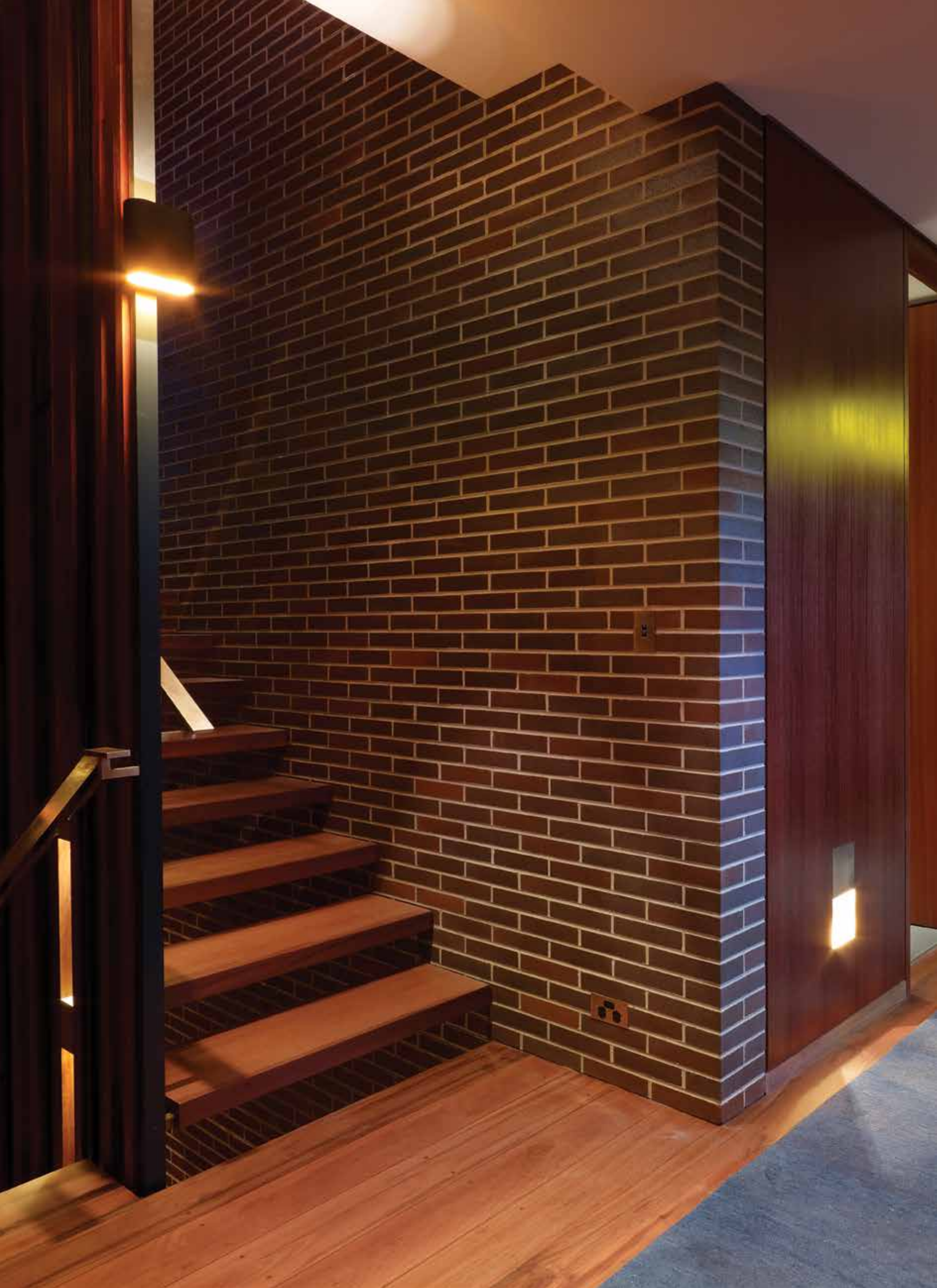
Gertrudis Brown



Brahman Granite



Bowral Blue





# Backed by Brickworks

Local expertise. Global quality. Brickworks Building Products is one of Australia’s biggest building material producers. With heritage going all the way back to one of Australia’s founding brick producers, we’re proud of our reputation for design, innovation and sustainability.

## BRICKWORKS


### AUSTRALIA


australbricks®

austral masonry®

austral precast®

bristile roofing®

southern cross cement®

BOWRAL BRICKS



nubrik®  
authentic brickwork

terraçade™  
TERRACOTTA FAÇADE SYSTEMS


Pronto Panel™


GB Masonry


URBANSTONE®




### NORTH AMERICA


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Sioux City Brick  
Since 1913


Lawrenceville  
BRICK


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We also recommend you view current product samples before making your final selections.



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