RETAINING WALLS & PAVERS

style and function
Our range of coloured, standard and premium masonry have set a new standard in quality and style for the versatile concrete block.

By adding oxides and coloured sands to our mix of raw materials, we produce blocks with contemporary colours, textures and appeal. Ideal for a range of projects from a modern beach residence to impressive commercial projects Austral Masonry has an array of products to suit your style.

Austral Masonry blends fine sand, cement, aggregate and quality colouring agents to produce unique coloured blocks. Having long been the workhorse of the construction industry, our products are frequently specified in cutting-edge residential and commercial designs due to their strength and versatility.

Part of the Brickworks Building Products Group, one of Australia's largest and most innovative building product manufacturers, Austral Masonry is part of a group of manufacturers which includes other industry leading brands such as Austral Bricks, Bristile Roofing, Austral Precast and Auswest Timber.
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style and function

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Inspired by design
These light weight blocks provide an easy way to create a practical outdoor space in your garden. The clean sharp lines provide a contemporary finish that will be the envy of the street.

APPLICATIONS
- Maximum wall height: 600mm
- Straight walls
- Corners
- Steps
**Hawkesbury Yellow**

- **Size:** 350L x 200W x 150H mm
- **Weight (each):** 13kg

**Oyster**

- **Size:** 300L x 200W x 150H mm
- **Weight (each):** 12.8kg
- **Face Area:** 22.2 units per m²

**Nougat**

**Right Corner**

- **Size:** 350L x 200W x 150H mm
- **Weight (each):** 13kg

**Hawkesbury Yellow**

**Left Corner**

- **Size:** 350L x 200W x 150H mm
- **Weight (each):** 13kg
From creatively designed paths and courtyards, to naturally textured garden retaining walls. The Valleystone system offers a versatile design, enabling curves to be built with ease, as well as stairs and straight walls.

**APPLICATIONS**
- Maximum wall height: 1000mm
- Steps
- Straight walls
- Curved walls
- Minimum circle.
- 22 Blocks based on 1m radius
- 12 blocks based on 570mm radius

Above: Valleystone Hawkesbury Yellow
**APPLICATIONS**

Maximum wall height: 1000mm

Steps

Straight walls

Curved walls

- Minimum circle: 22 Blocks based on 1m radius
- 12 blocks based on 570mm radius

**Angled Unit**

- Size: 295L x 203W x 125H mm
- Weight (each): 13kg
- Face Area: 27.1 units per m²

**Straight Sided Unit**

- Size: 295L x 203W x 125H mm
- Weight (each): 14.9kg
- Face Area: 27.1 units per m²

**Hawkesbury Yellow**

**Nougat**

**Charcoal**
The Sydneystone blocks are available in our standard split face finish with chamfered edges at the top and both sides. Whether you’re building a straight or curved wall, Sydneystone offers a great solution for a clean and contemporary dry stacked retaining wall.

**Applications**
- Maximum wall height: 800mm (3 m when engineered)
- Straight walls
- Curved walls
- Corners
- Steps
- Min radius: Approx 1,200 mm

Above: Sydneystone Nougat
Nougat
Truffle
Charcoal

Standard Unit
Size: 390 L x 245 W x 200 H mm
Weight (each): 21 kg
Face area: 13 units per m²

Corner Block
Size: 340 L x 140 W x 200 H mm
Weight (each): 20 kg
Available in right and left (right shown)

Capping Unit
Size: 390 L x 245 W x 90 H mm
Weight (each): 16 kg
2.56 per lineal metre

style and function
Available in a collection of natural hues, Hastings is available in a colour to suit your next landscaping project. Each product contains natural tones to create a realistic and appealing finish to each block. Structurally sound and perfect for the ‘do it yourself’ weekend warrior, the Hastings retaining wall blocks require no mortar, and are virtually maintenance free.

APPLICATIONS
- Maximum wall height: 800mm
- 3m when engineered.
- (Please refer to Technical Manual)
- Straight walls
- Curved walls
- Corners
- Steps
- Min Radius: Approx 1200mm
Wall Block
Size: 390L x 245W x 200H mm
Weight (each): 21.5kg
Blocks per m²: 1 m² wall = 13 blocks m²

Corner Block
Size: 340L x 140W x 200H mm
Weight (each): 20kg
Available in left or right
(Right-hand corner block shown)

Half Cap
Size: 195L x 245W x 90H mm
Weight (each): 9kg
Half Caps per lineal metre: 5.13

Sepia
Beach
Alpine
Charcoal
VINTAGESTONE
The stylish, robust retaining wall system

Vintagestone offers the structural robustness of an interlocking pin system, with elegance and durability. Vintagestone offers a solution for walls up to 12 metres when suitably designed by an engineer.

Applications
- Maximum wall height: 800 mm*
  (12 m when engineered)
- Straight walls
- Corners
- Steps

*When using front pin holes to secure units and there are no surcharge loads behind the wall. Please check with your local council in regards to engineering requirements.
Hawkesbury Yellow

**Standard Unit**
Size: 455 L x 315 W x 200 H mm
Weight (each): 42 kg
Face area: 11 units per m²

**Corner Unit**
Size: 438 L x 210 W x 200 H mm
Weight (each): 29 kg

**Capping Unit**
Size: 455 L x 320 W x 100 H mm
Weight (each): 31 kg
2.2 per lineal metre

*Corner Unit available in Left and Right

^All Vintagestone products are made to order
The Keystone retaining wall system is robust, strong, and available in standard and flushface finishes. This product is ideal for both straight and curved walls and features a patented interlocking pin connecting system that is best suited for engineered walls up to 15m in height.

Applications

Maximum wall height: 800 mm*
(15 m when engineered)
- Straight walls
- Curved walls
- Corners
- Steps

*When using front pin holes to secure units and there are no surcharge loads behind the wall. Please check with your local council in regards to engineering requirements.
Natural* Almond Charcoal

Standard Unit
Size: 455 L x 315 W x 200 H mm
Weight (each): 39 kg
Face area: 11 units per m²

Flushface Unit
Size: 455 L x 315 W x 200 H mm
Weight (each): 42 kg
Face area: 11 units per m²

Capping Unit
Size: 455 L x 320 W x 100 H mm
Weight (each): 31 kg
2.2 per lineal metre

Flushface Straight Side Cap
Size: 455 L x 320 W x 100 H mm
Weight (each): 31 kg
2.2 per lineal metre

Corner Unit* *
Size: 438 L x 210 W x 200 H mm
Weight (each): 29 kg

* Corner Unit available in Left and Right
^ 'Natural' colour is made to order
Add a sleek, modern look to any landscape using Explorer Smooth concrete sleepers. Manufactured using 40MPa concrete and reinforced with steel, Explorer Smooth concrete sleepers are an economical option for a durable, low maintenance retaining wall.

Applications

- Maximum wall height: 800 mm*
  (3 m when engineered)
- Straight walls
- Corners
- Steps

*Please check with your local council in regards to engineering requirements.
Explorer Smooth Unit
Sizes:
1200 L x 200 H x 75 T mm
1530 L x 200 H x 75 T mm
2000 L x 200 H x 75 T mm
Explorer Timberlook is the ideal solution to create a stylish and cost effective retaining solution for your home. By replicating the colours and textures of real timber, Explorer Timberlook concrete sleepers are distinguished by their natural finish.

Applications
- Maximum wall height: 800 mm* (3 m when engineered)
- Straight walls
- Corners
- Steps

*Please check with your local council in regards to engineering requirements.

Above: Explorer Timberlook Ironbark
Explorer Timberlook Unit

Sizes:
1580 L x 200 H x 75 T mm
2000 L x 200 H x 75 T mm
Design an elegant, earthy look with the warm colours and textures in the Explorer Sandstone range.

Featuring a block face pattern, Explorer Sandstone concrete sleepers are manufactured using 40MPA concrete and reinforced with steel for strength and durability.

**Applications**

- Maximum wall height: 800 mm*
- (3 m when engineered)
- Straight walls
- Corners
- Steps

*Please check with your local council in regards to engineering requirements.
Explorer Sandstone Unit
Sizes:
1580 L x 200 H x 75 T mm
2000 L x 200 H x 75 T mm
Capture natural elegance and style with the Explorer Slate range. Manufactured using 40MPA concrete and reinforced with steel, the Explorer Slate range offers a unique slate finish in natural earthy colours.

**Applications**
- Maximum wall height: 800 mm* (3 m when engineered)
- Straight walls
- Corners
- Steps

*Please check with your local council in regards to engineering requirements.
Explorer Slate Unit
Sizes:
1580 L x 200 H x 75 T mm
The Camino 50 offers a small format paver ideal for driveways, paths and pool surrounds. These versatile pavers offer easy installation with a contemporary finish.

**APPLICATIONS**
- Pools
- Paths
- Patios
- Courtyards
- Driveways
Camino 50
Size: 230L x 115W x 50H mm
Weight (each): 2.8 kg
Units per m²: 37.8
For contemporary style with impact, the Broadway range of pavers offer sharp modern lines and colours, making them ideal for courtyards, paths and other outdoor spaces.

**APPLICATIONS**
- Pools
- Paths
- Patios
- Courtyards
Broadway 400
Size: 400L x 400W x 45H mm
Weight (each): 16 kg
Units per m²: 6.25
* Stone colour is only available in Broadway 400 size

Broadway 300
Size: 300L x 300W x 50H mm
Weight (each): 9.8 kg
Units per m²: 11.11

Broadway 150*
Size: 300L x 150W x 60H mm
Weight (each): 5.8 kg
Units per m²: 22.2
* Broadway 150 only available in Almond and Charcoal

Oyster  Sandune  Almond  Stone*  Charcoal

style and function
HOW TO

build segmental block retaining walls

Austral Masonry retaining wall blocks are an ideal choice for retaining walls in gardens, a range of residential applications and commercial projects. The interlocking and dry stacked nature of these blocks makes them easy to install for the “Do It Yourself” landscaper. No matter what the project, the result is always an attractive and low maintenance retaining wall. The flexibility of the system provides tremendous scope, from edging to terraces, straight walls to curves.

Note: Please consult with regulating council for local design requirements prior to the commencement of any retaining wall. Councils may request walls over 0.8m in height and / or where a surcharge exists (e.g. driveway, house, fence or other structure) be designed and certified by a suitably qualified consulting engineer.

Your Checklist

- String line
- Tape measure
- Walling units
- Compaction tool
- Shovel
- Spirit level
- Wheel barrow
- Agriculture drain pipe
- Pegs or stakes
- Broom
- Gloves & eye protection
- Saw (to cut blocks if req’d)
- 10-20 mm crushed stone
- Crushed rock (for base)
Step 1: Permits
Check with your local council to ensure all local Building Codes are complied with.

Step 2: Foundation
The foundation material shall be compacted by several passes of a mechanical plate vibrator. Where there are significant variations of foundation material or compaction, soft spots, or where there is ponding of ground water, the material shall be removed, replaced and compacted in layers not exceeding 150 mm. Trenches shall be dewatered and cleaned prior to construction, such that no softened or loosened material remains.

Step 3: Levelling Pad (footing)
The facing shall be built on a levelling pad, not less than 150 mm thick and 300 to 600 mm wide, consisting of one of the following options:
• Compacted road base
• Compacted crushed rock, well-graded and of low plasticity (without clay content), compacted by a plate vibrator;
• Cement-stabilized crushed rock, with an additional 5% by mass of cement thoroughly mixed, moistened and compacted by a plate vibrator; or
• Lean-mix concrete with a compressive strength of not less than 15 MPa.

Step 4: First Course
Place the first course on the levelling pad and tap into place ensuring blocks are level, front to back and side to side (check with a spirit level). The use of a level and string line is recommended to ensure the first course is laid correctly. Ensure each block is also well filled with free-draining material (eg. crushed rock aggregate / blue metal). For walls up to 1 metre high, make sure at least 100mm of the first-course blocks are buried below the finished ground level. Allow 200 mm for walls over 1 metre high and up to 3 metres high. These walls will need to be engineered.

Step 5: Drainage and Back Fill
Place 100 mm diameter agricultural pipe with geotextile sock behind the wall, with a 1 in 100 fall. Backfill behind the courses of blocks to a width of 300 mm using 10-20 mm free draining material (eg. crushed rock aggregate / blue metal). Ensure each block is also well filled with free-draining material. Backfill behind the drainage layer with selected backfill material in a maximum of 200mm layers. Compaction rate of 95% must be achieved (use only hand operated plate compactors within 1 metre from the back of the wall). Do not use expansive clays to backfill. Be careful not to mechanically compact too close to the wall.

Step 6: Laying Additional Courses
Clean any debris from the top of the wall to ensure the next block sits perfectly. Ensure each block is filled with free draining material, and place next course on top. Place the drainage material behind the blocks to 300 mm. Stack units, placing drainage aggregate and compact backfill for each block layer until the wall is complete. For Heron and Hayman walls it is recommended that you break 20-30% of the back 'wings' off to allow backfill material to lock into the block wall. (when using no fines concrete)

Step 7: Capping Units
Once backfilling and cleaning is completed as per Step 5 and Step 6 fix the purpose made Capping Blocks with a flexible adhesive.

Step 8: Maximum Wall Height
This information should be viewed as a guide only. The particular circumstances of retaining wall projects vary significantly in ways that often dictate the use of particular materials and techniques to address challenges presented by those circumstances. Austral Masonry recommends you to ensure that you obtain appropriate professional advice tailored to your circumstances before commencing retaining wall projects.
HOW TO build concrete sleeper retaining walls

1. Prepare the Area
   - Clear and level your site where you plan to build the retaining wall. Ensure you leave 300mm behind the retaining wall area for backfill.

2. Alignment
   - Place a star piquet or peg at both ends of the proposed wall. Attach two string lines at each end of the wall, top and bottom, to keep your wall aligned.

3. Mark out Hole Positions
   - Starting from one end of the wall, mark a cross on the ground at intervals with their centre being approximately 20mm more than the length of the sleeper. For example: If you are using 1530mm sleepers the hole centres should be 1550mm apart – note, this will vary based on the length of sleeper used.

4. Auger Holes and Pour Concrete
   - Auger holes as per your engineers specifications as approved by council.
   - Pour concrete into holes, one at a time.
   - Make the concrete stiff. If using readymix concrete, order 20/20, 80 slump.
   - Set your post by lowering into ground until level with the top string lines.
   - Ensure there is a minimum lean back of 30mm for every 1.0m in height.

5. Checking Posts
   - Use a spirit level to make sure all your posts are aligned with the string line and are perpendicular on the sides.
   - It is also important to measure the remaining distance to the top of your steel posts, to ensure the sleepers finish flush with the top of the posts.
   - If required, lay a concrete pad on both sides of the steel post.

6. Ag Pipe and Backfill
   - Allow the concrete to cure for two to three days before you place your sleepers in. Place ag pipe at the base, then backfill with gravel to 200mm from the top.

7. Soil Plug
   - A soil plug is then placed in, to fill the wall to the top.

*Retaining walls must be designed to AS4678
*Most councils require that any retaining walls over 0.8m in height from natural ground level are subject to building approval.
*Any retaining wall that is less than 1.5m away from a building or other retaining wall also requires building approval.
THE FINER DETAILS

DESIGN

concrete sleeper walls for 5kPa walls

<table>
<thead>
<tr>
<th>WALL HEIGHT (mm)</th>
<th>SLEEPER LENGTH (mm)</th>
<th>POST SIZE (mm)</th>
<th>POST C/C SPACING (mm)</th>
<th>POST LENGTH (mm)</th>
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</thead>
<tbody>
<tr>
<td>0.4m</td>
<td>2.00m</td>
<td>UC100</td>
<td>2020mm</td>
<td>1.15m</td>
</tr>
<tr>
<td>0.6m</td>
<td>2.00m</td>
<td>UC100</td>
<td>2020mm</td>
<td>1.15m</td>
</tr>
<tr>
<td>0.8m</td>
<td>2.00m</td>
<td>UC100</td>
<td>2020mm</td>
<td>1.55m</td>
</tr>
<tr>
<td>1.2m</td>
<td>2.00m</td>
<td>UC100</td>
<td>2020mm</td>
<td>1.95m</td>
</tr>
<tr>
<td>1.4m</td>
<td>1.53m Smooth</td>
<td>UC100</td>
<td>1550mm</td>
<td>2.25m</td>
</tr>
<tr>
<td>1.6m</td>
<td>1.53m Smooth</td>
<td>UC100</td>
<td>1550mm</td>
<td>2.65m</td>
</tr>
<tr>
<td>1.8m</td>
<td>1.53m Smooth</td>
<td>UC100</td>
<td>1550mm</td>
<td>3.15m</td>
</tr>
<tr>
<td>2.0m</td>
<td>1.53m Smooth</td>
<td>UC100</td>
<td>1550mm</td>
<td>3.55m</td>
</tr>
<tr>
<td>1.4m</td>
<td>1.58m Sandstone and Timberlook</td>
<td>UC100</td>
<td>1600mm</td>
<td>2.75m</td>
</tr>
<tr>
<td>1.6m</td>
<td>1.58m Sandstone and Timberlook</td>
<td>UC100</td>
<td>1600mm</td>
<td>3.15m</td>
</tr>
<tr>
<td>1.8m</td>
<td>1.58m Sandstone and Timberlook</td>
<td>UC100</td>
<td>1600mm</td>
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</tr>
<tr>
<td>2.0m</td>
<td>1.58m Sandstone and Timberlook</td>
<td>UC100</td>
<td>1600mm</td>
<td>3.95m</td>
</tr>
</tbody>
</table>

Please note. the above table does not allow for the additional loading of colorbond fences when they are clamped to the walls using fence brackets which will require additional design criteria to be considered.

Exclusion Zone

There must be an exclusion zone behind the wall at an angle of 45 – no structure can be placed within that exclusion zone. Zone of influence = height of the wall. Backfill must be placed and compacted in layers to not exert pressure on the wall due to consolidation over time.

Global stability and tiered wall design is excluded and should be assessed by a qualified Geotechnical engineer.

The following Australian Standards should be consulted when designing a concrete sleeper retaining wall system:

## RETAINING WALL

**information**

<table>
<thead>
<tr>
<th>Product</th>
<th>Range</th>
<th>Description</th>
<th>Max Wall Height</th>
<th>Size</th>
<th>Weight</th>
<th>Coverage</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrinastone</td>
<td>Standard Unit</td>
<td>600mm</td>
<td>300L x 200W x 150H</td>
<td>12.8kg</td>
<td>22.2 Blocks per m²</td>
<td>Straight Walls, Corners, Steps</td>
<td></td>
</tr>
<tr>
<td>Arrinastone</td>
<td>Right Corner</td>
<td>-</td>
<td>350L x 200W x 150H</td>
<td>13kg</td>
<td>N/A</td>
<td>Corners</td>
<td></td>
</tr>
<tr>
<td>Arrinastone</td>
<td>Left Corner</td>
<td>-</td>
<td>350L x 200W x 150H</td>
<td>13kg</td>
<td>N/A</td>
<td>Corners</td>
<td></td>
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<tr>
<td>Hastings</td>
<td>Standard Unit</td>
<td>800mm*</td>
<td>390L x 245W x 200H</td>
<td>21.5</td>
<td>13 Blocks per m²</td>
<td>Curved Walls, Straight Walls, Corners, Steps</td>
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<tr>
<td>Hastings</td>
<td>Corner Block</td>
<td>-</td>
<td>340L x 140W x 200H</td>
<td>20kg</td>
<td>N/A</td>
<td>Corners</td>
<td></td>
</tr>
<tr>
<td>Hastings</td>
<td>Half Cap</td>
<td>-</td>
<td>195L x 245W x 90H</td>
<td>9kg</td>
<td>5.13 per lineal metre</td>
<td>Capping</td>
<td></td>
</tr>
<tr>
<td>Valleystone</td>
<td>Angled Unit</td>
<td>1000mm*</td>
<td>295L x 203W x 125H</td>
<td>13kg</td>
<td>27.1 Blocks per m²</td>
<td>Curved Walls, Straight Walls, Steps</td>
<td></td>
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<tr>
<td>Valleystone</td>
<td>Straight Sided Unit</td>
<td>-</td>
<td>295L x 203W x 125H</td>
<td>14.9kg</td>
<td>27.1 Blocks per m²</td>
<td>Curved Walls, Straight Walls, Steps</td>
<td></td>
</tr>
<tr>
<td>Sydneystone</td>
<td>Wall Block</td>
<td>800mm*</td>
<td>390L x 245W x 200H</td>
<td>21kg</td>
<td>13 Blocks per m²</td>
<td>Curved Walls, Straight Walls, Corners, Steps</td>
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<tr>
<td>Sydneystone</td>
<td>Corner Block</td>
<td>-</td>
<td>340L x 140W x 200H</td>
<td>20kg</td>
<td>N/A</td>
<td>Corners</td>
<td></td>
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<tr>
<td>Sydneystone</td>
<td>Capping Block</td>
<td>-</td>
<td>390L x 245W x 90H</td>
<td>16kg</td>
<td>2.56 Blocks per lineal metre</td>
<td>Capping</td>
<td></td>
</tr>
</tbody>
</table>

Maximum wall heights in good soils (gravels, sandy gravels, crushed sandstone).

* Hastings and Sydneystone can be built up to 3m when designed by a suitably qualified engineer and combined with soil reinforcement or No Fines concrete.

^Max wall height noted applies when using interlocking pins in the front pin holes to secure units. Vintagestone and Keystone can be built up to 12m high when designed by a suitably qualified engineer and combined with soil reinforcement.
<table>
<thead>
<tr>
<th>Product</th>
<th>Range</th>
<th>Description</th>
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<th>Size</th>
<th>Weight</th>
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<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vintagestone</td>
<td>Standard Unit</td>
<td></td>
<td>800mm* **</td>
<td>455L x 315W x 200H</td>
<td>41kg</td>
<td>11 Blocks per m²</td>
<td>Straight Walls, Corners, Steps</td>
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<tr>
<td>Vintagestone</td>
<td>Corner Unit (Left and Right)</td>
<td></td>
<td></td>
<td>438L x 310W x 200H</td>
<td>29kg</td>
<td>N/A</td>
<td>Corners</td>
</tr>
<tr>
<td>Vintagestone</td>
<td>Capping Unit</td>
<td></td>
<td></td>
<td>455L x 320W x 100H</td>
<td>31kg</td>
<td>2.2 per lineal metre</td>
<td>Capping</td>
</tr>
<tr>
<td>Keystone</td>
<td>Standard Unit</td>
<td></td>
<td>800mm*</td>
<td>455L x 315W x 200H</td>
<td>39kg</td>
<td>11 Blocks per m²</td>
<td>Straight Walls, Corners, Steps</td>
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<td>Keystone</td>
<td>Flushface Unit</td>
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<td>455L x 315W x 200H</td>
<td>42kg</td>
<td>11 Blocks per m²</td>
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<td>Capping Unit</td>
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<td></td>
<td>455L x 320W x 100H</td>
<td>30kg</td>
<td>2.2 per lineal metre</td>
<td>Capping</td>
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<tr>
<td>Keystone</td>
<td>Flushface Straight Side Cap</td>
<td></td>
<td></td>
<td>455L x 320W x 100H</td>
<td>31kg</td>
<td>2.2 per lineal metre</td>
<td>Capping</td>
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<tr>
<td>Keystone</td>
<td>Corner Unit (Left and Right)</td>
<td></td>
<td></td>
<td>440L x 210W x 200H</td>
<td>29kg</td>
<td>N/A</td>
<td>Corners</td>
</tr>
<tr>
<td>Explorer Smooth</td>
<td>Standard Unit</td>
<td>800 mm* 3m with engineering</td>
<td>1200 L x 200 H x 75T mm</td>
<td>41 kg</td>
<td>4.17 Units per m²</td>
<td>Straight Walls, Corners, Steps</td>
<td></td>
</tr>
<tr>
<td>Explorer Timberlook</td>
<td>Standard Unit</td>
<td>800 mm* 3m with engineering</td>
<td>1580 L x 200 H x 75T mm</td>
<td>51 kg</td>
<td>3.16 Units per m²</td>
<td>Straight Walls, Corners, Steps</td>
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<tr>
<td>Explorer Sandstone</td>
<td>Standard Unit</td>
<td>800 mm* 3m with engineering</td>
<td>1580 L x 200 H x 75T mm</td>
<td>58 kg</td>
<td>3.16 Units per m²</td>
<td>Straight Walls, Corners, Steps</td>
<td></td>
</tr>
<tr>
<td>Explorer Slate</td>
<td>Standard Unit</td>
<td>800 mm* 3m with engineering</td>
<td>1580 L x 200 H x 75T mm</td>
<td>58 kg</td>
<td>3.16 Units per m²</td>
<td>Straight Walls, Corners, Steps</td>
<td></td>
</tr>
</tbody>
</table>

Please contact your Austral Masonry representative for more information.
RETAINING WALL cross sections

**Arrinastone**

- No loads are to be located within 1.0 metre behind the top unit
- Dish drain to direct surface run off
- Maximum height 600mm
- First Course to be buried: 30mm
- Depth of footing: 100mm
- Compacted Road Base 100mm D x 350mm W
- 100mm diameter 'ag' pipe
- 100mm Top Soil (e.g. mulch)
- Backfill to be placed and compacted in block layers
- Crushed Stone
  (free draining medium)
  300mm wide

Please Note: Backfill should be no higher than the top of the retaining wall.

**Hastings/Sydeystone**

- Capping Block
- Dish drain to direct surface run off
- Step back angle 20°
- Maximum height "H"
- Half to one block buried below ground
- Soil or mulch
- Backfill
- Crushed Stone
  (free draining medium)
  300mm wide
- 100mm diameter ‘ag’ pipe
- Depth of footing: 150mm D x 500mm W
- Compacted road base

* Hastings and Sydeystone can be built up to 3m when designed by a suitably qualified engineer and combined with soil reinforcement or no fines concrete. Contact your local Austral Masonry representative for more information.
KEYSTONE/VINTAGESTONE

For straight walls - Dish drain to be installed to direct surface run off (if required)

No loads to located within 1m behind wall

Filter fabric to keep dirt out of drainage layer

Backfill placed and compacted in 250mm layers

Granular material for drainage

Capping Block (Keystone only)

Granular material for drainage

300mm width of 12-20mm free drainage granular materials e.g. blue metal

First Course to be buried as per engineer specifications

Compacted Road Base, crushed stone or gravel levelling pad: 100mm by 350mm wide

Drainage pipe

Granular material for drainage

Backfill to be placed and compacted in block layers

First Course to be buried as per engineer specifications

Compacted Road Base, crushed stone or gravel levelling pad: 150mm by 600mm wide

* Keystone can be built up to 15m when designed by a suitably qualified engineer and combined with soil reinforcement or no fines concrete. Contact your local Austral Masonry representative for more information.

Please Note: Backfill should be no higher than the top of the retaining wall.
HOW TO
lay pavers on flexible base
(residential pedestrian applications only)

Materials required

- Pavers
- Gravel Roadbase (1m³ covers 10m² at a compacted depth of 100mm)
- Bedding Sand (1m³ will cover 30m² at a depth of 30mm)
- String lines, tape measure and pegs
- Spirit level
- Two Screed Rails – two flat steel bars (Approx. 3m x 50mm x 2mm)
- 2-3m long concreter's screed
- Broom, rake and shovel
- Plate vibrator compactor
- Edge restraints (concrete, cement or timber)
- Cutting Equipment – Paver Splitter/Masonry Brick Saw
**HOW TO**

*lay pavers on flexible base*

*(residential pedestrian applications only)*

For Pedestrian only (no vehicles) eg patios, courtyards and paths.

It is recommended to use a qualified experienced trades person.

1. **Base Course**
   The base course shall be gravel road base and be 75 to 100mm thick. The Base course shall be levelled within a tolerance of no more than 5mm from the base of the level in any direction. It shall be of an even thickness and adequate drainage precautions taken. It should be correctly compacted to suit the intended application. There should be no ponding on the surface of the base course as this may cause problems with the integrity of the paving application.

2. **Bedding Sand**
   Bedding Sand - cover the sub base with well graded coarse bedding sand. Ensure that the sand is relatively dry and spread evenly then compact with a hand held or mechanical compactor. The thicknesses of the bedding sand should be between 25 and 30mm thick when compacted.

3. **Levelling**
   Use a screed to level the sand and allow for a slight fall away from any walls to ensure adequate drainage.

4. **Grid Lines**
   The pavers can be placed on the bedding sand and the grid lines.

5. **Edge Restraints**
   The perimeter of all paved areas should be provided with edge restraints to prevent lateral spread of the pavers and consequent loss of interlock. An edge beam may be necessary to put in place if the paving area doesn’t provide them i.e. a wall or kerb etc. The edge beams are generally made using a concrete mix to the relative Australian Standards.

6. **Compacting**
   Compacting of the paver can be done using an appropriate compacting plate with the plate covered with a soft layer of material to avoid chipping the surface of the pavers (ie carpet).

7. **Joints**
   The joints in the pavers should be a minimum of 6mm and can be filled after compaction with appropriate jointing sand swept into the joints. Spread dry sand over the paved area and brush it into the vertical joints with a stiff bristled broom. Please clean the area of excess sand before final compaction.

8. **Re-compacting**
   The area can be re-compacted after the joints have been swept with sand and more sand applied where necessary.

9. **Regular Checks**
   Regular checks should be done to ensure that the paving is performing as desired and any maintenance should be carried out to ensure the structural integrity of the paving. Austral Masonry recommends sealing of all pavers after installation.
<table>
<thead>
<tr>
<th>Product</th>
<th>Range</th>
<th>Description</th>
<th>Size</th>
<th>Weight</th>
<th>Coverage</th>
<th>Colours</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camino 50</td>
<td>Standard</td>
<td>Unit</td>
<td>230L x 115W x 50H</td>
<td>2.8kg</td>
<td>37.8 Units per m²</td>
<td>Sandune, Almond, Charcoal</td>
<td>Pools, Pedestrian, Driveways</td>
</tr>
<tr>
<td>Broadway 150</td>
<td>Standard</td>
<td>Unit</td>
<td>300L x 150W x 60H</td>
<td>5.8kg</td>
<td>22.2 Units per m²</td>
<td>Sandune, Almond, Charcoal</td>
<td>Pools, Pedestrian</td>
</tr>
<tr>
<td>Broadway 300</td>
<td>Standard</td>
<td>Unit</td>
<td>300L x 300W x 50H</td>
<td>9.8kg</td>
<td>11.1 Units per m²</td>
<td>Sandune, Almond, Charcoal</td>
<td>Pools, Pedestrian</td>
</tr>
<tr>
<td>Broadway 400</td>
<td>Standard</td>
<td>Unit</td>
<td>400L x 400W x 45H</td>
<td>16kg</td>
<td>6.25 Units per m²</td>
<td>Sandune, Almond, Charcoal</td>
<td>Pools, Pedestrian</td>
</tr>
</tbody>
</table>
MAINTENANCE

of pavers

Maintaining your paved area will guarantee that it holds its good looks and natural appeal forever, ensuring added resale value to your home.

All paved areas, over time, are subject to spillages and a build up of dirt and grime.
By following certain guidelines and cleaning procedures, maintaining the good look of your pavers need not be a problem.

**Efflorescence**

Efflorescence is a powdery deposit of salts (usually white or yellow) and is often found on the surface of concrete pavers after a period of rain. Efflorescence appears due to external sources from surrounding materials.

For example, salty soils or fertilisers draw up through the pavers due to the drying effect.

Prior to laying your pavers, make sure a clean bed of sand is the foundation of the paving – this will form a barrier to salts migrating to the pavers from below. Efflorescence can be removed by using either a dry brushing technique or wiping with a damp cloth making sure the salts are carried away from the pavers.

**Organic Growths – Fungus, Mould and Moss**

Porous masonry may provide an environment for organic growth when it is continuously moist, especially in light but shady conditions and when there are plenty of nutrients available.

Clean off the growth as much as possible with a dry bristle brush. Organic growths should be treated with liquid chlorine, or common household chemicals such as Exitmould and White King or a proprietary weed killer. The solution should be left for a short period and then brushed off the treated area with hot water or damp sand.
Repeat as necessary.
BEAUTIFUL PRODUCTS that last forever
Our genuine building products create the most beautiful and sustainable environments and places in Australia.

Brickworks Building Products is one of Australia’s largest and most diverse building material producers and providers. With our heritage as one of Australia’s founding brick businesses many generations ago, we hold the values of family, community, sustainability, innovation and quality at our core. We know our quality products last forever, which is why our some of products come with a 100 year guarantee.

Under the Brickworks Building Products umbrella are some of Australia’s best known building materials brands. Our products include bricks, pavers, masonry blocks, retaining wall systems, precast concrete panels, solar, concrete and terracotta roof tiles, timber products, terracotta façades and specialised building systems.

With a broad product portfolio of leading products from Australia and around the world — available right across the country — Brickworks Building Products pride ourselves on our commitment to product, service excellence and our leadership position.

We are BRICKWORKS

Australia

North America
The product images shown in this brochure give a general indication of product colour for your preliminary selection. Austral Masonry recommends all customers see actual product samples at a selection centre prior to making final selections.

1. **Stock colours.** Colours other than stock colours are made to order. Contact your nearest Austral Masonry office for your area’s stock colours. A surcharge applies to orders less than the set minimum quantity.  
2. **Colour and texture variation.** The supply of raw materials can vary over time. In addition, variation can occur between product types and production batches.
3. **We reserve the right to change the details in this publication without notice.**  
4. **For a full set of Terms & Conditions of Sale please contact your nearest Austral Masonry sales office.**  
5. **Important Notice.** Please consult with your local council for design regulations prior to the construction of your wall. Councils in general require those walls over 0.5m in height and/or where there is loading such as a car or house near the wall be designed and certified by a suitably qualified engineer.  
6. **Max wall heights disclaimer.** The gravity wall heights are maximum heights calculated in accordance with CMAA MA-53 Appendix D guidelines and a qualified engineer should confirm the suitability of the product for each application. As such, due consideration must be given to but not limited to: Cohesion. Dry backfill, no ingress of any water into the soil behind the retaining wall. All retaining walls are designed for zero surcharge unless noted otherwise. These walls are intended for structure Classification A walls only as defined in AS4678 Earth Retaining Structures as being where failure would result in minimal damage and/or loss of access.