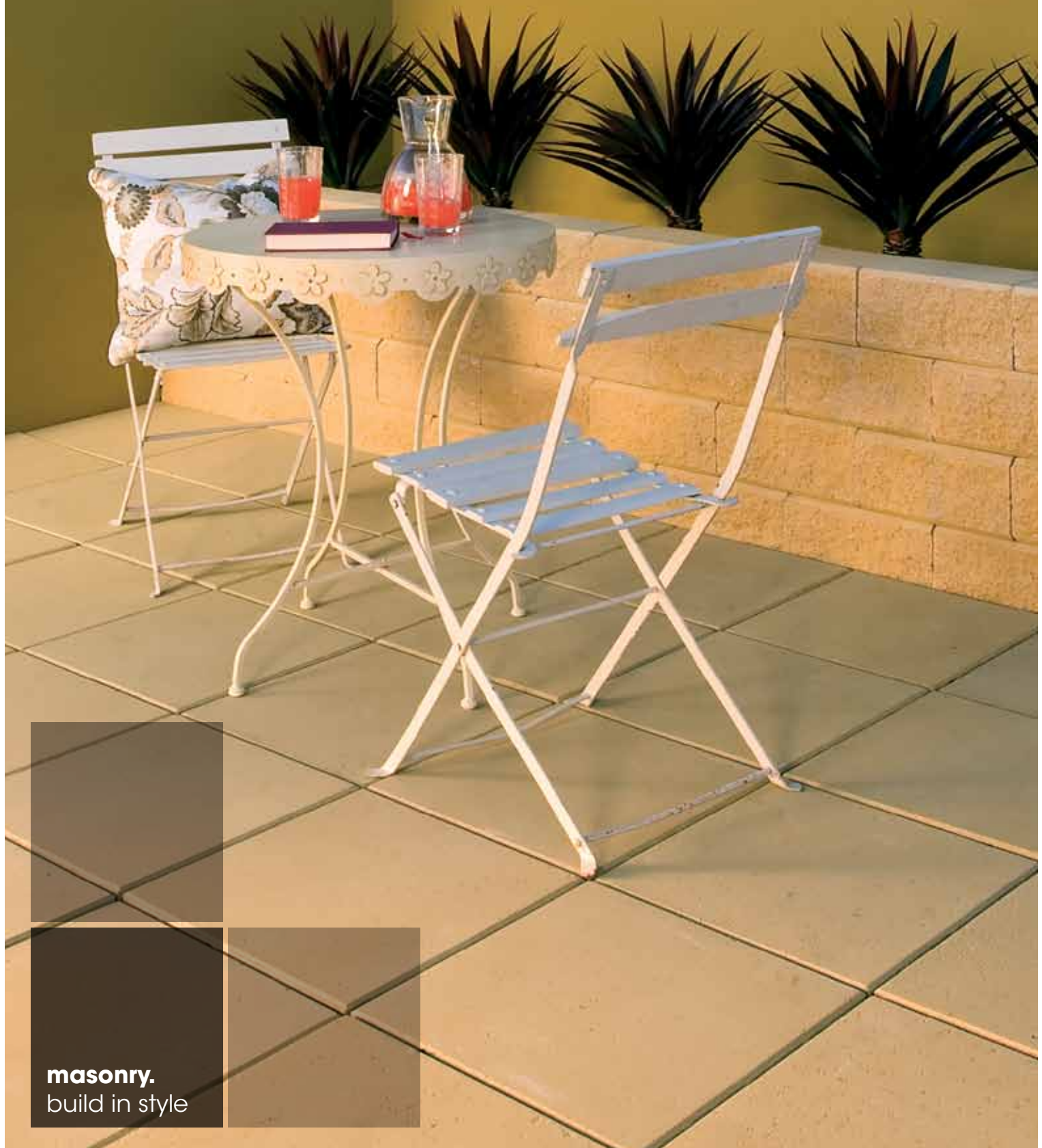


Landscaping

Retaining Walls & Pavers



masonry.
build in style

contents.

Retaining Wall Ranges

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Front Cover: Broadway 400 - Sandlune & Arrinastone - Nougat.
Contents: XX - xx.



build in style

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®, Bristle Roofing®, Austral Precast™ and Auswest Timber®.



SUITABLE FOR:

- MAX. wall height: 600mm
- Straight walls
- Corner
- Steps

Arrinastone

Arrinastone retaining wall blocks

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



Charcoal



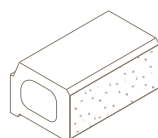
Paperbark



Nougat



Hawkesbury Yellow

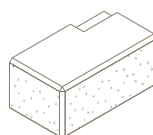


Standard Unit

Size(mm): 300L x 200W x 150H

Weight (each): 12.8kg

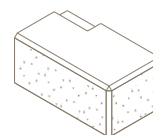
Face area: 22.2 units per m²



Right Corner

Size(mm): 350L x 200W x 150H

Weight (each): 13kg

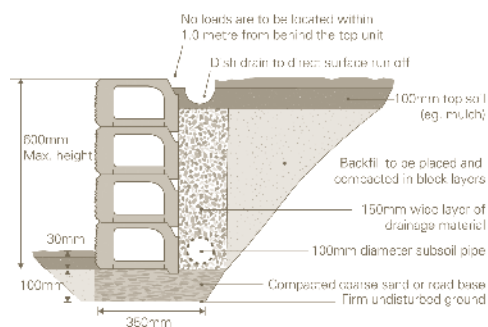


Left Corner

Size(mm): 350L x 200W x 150H

Weight (each): 13kg

Typical Cross Section



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





SUITABLE FOR:

- MAX. wall height: 1000mm
- Straight walls
- Curved walls

Valleystone

Versatility and style.

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.



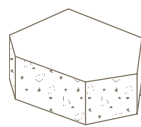
Charcoal



Nougat



Hawkesbury Yellow

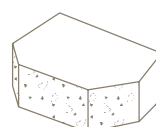


Angled Unit

Size(mm): 295L x 203W x 125H

Weight (each): 13kg

Face area: 26.2 units per m²



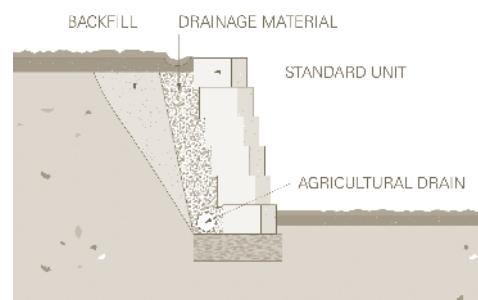
Straight Sided Unit

Size(mm): 295L x 203W x 125H

Weight (each): 13kg

Face area: 26.2 units per m²

Typical Cross Section



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





SUITABLE FOR:

- MAX. wall height: 972mm
- Straight walls
- Curved walls
- Corners
- Steps

Grandstone

A refined finish.

Grandstone blocks offer a refined finish to your garden. The framed splitface blocks are versatile and easy to install, while the classic cap completes the wall. Ideal for straight, curved and stepped walls, Grandstone offers a smart contemporary finish.



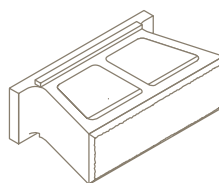
Charcoal



Honeycomb



Nougat

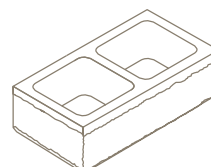


Standard Unit

Size(mm): 440L x 280W x 162H

Weight (each): 24.2kg

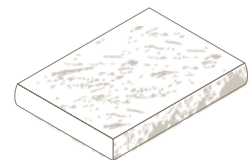
Face area: 14 units per m²



Corner Unit

Size(mm): 440L x 220W x 162H

Weight (each): 18.8kg

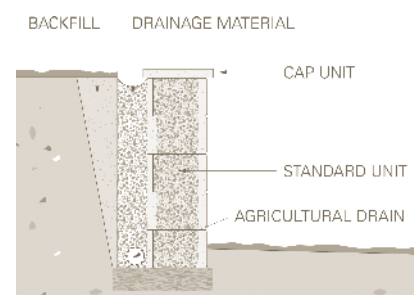


Classic Cap

Size(mm): 440L x 280W x 65H

Weight (each): 6.8kg

Typical Cross Section



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





SUITABLE FOR:

- MAX. wall height: 1200mm
- Straight walls
- Curved walls
- Corners
- Steps

Keystone

Engineered perfection.

The Keystone retaining wall system is robust and strong, available in standard and flushface finishes ideal for both straight and curved walls. The patented interlocking pin connecting system is best suited for engineered walls up to 15m in height.



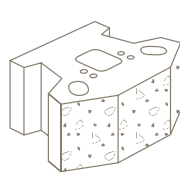
Charcoal



Almond



Natural

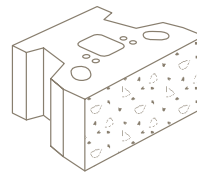


Standard Unit

Size(mm): 455L x 315W x 200H

Weight (each): 38kg

Face area: 11 units per m²

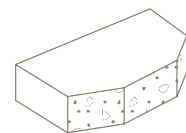


Flushface Unit

Size(mm): 455L x 315W x 200H

Weight (each): 41kg

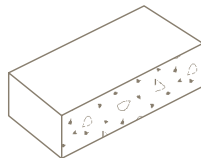
Face area: 11 units per m²



Cap Unit

Size(mm): 455L x 310W x 100H

Weight (each): 20kg

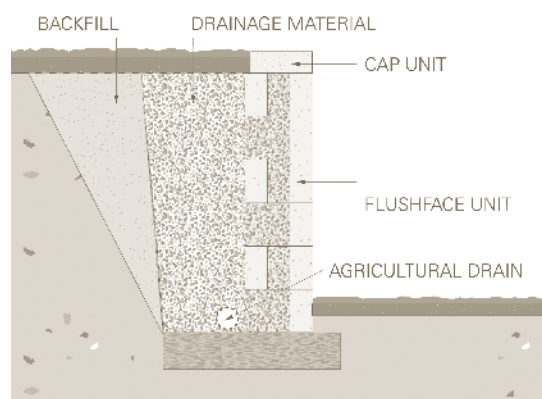


Flushface Straight Sided Cap

Size(mm): 455L x 310W x 100H

Weight (each): 20kg

Typical Cross Section



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





SUITABLE FOR:

- Max. wall height: 1200mm
- Straight walls
- Corners
- Steps

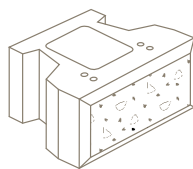
Vintagestone

The stylish, robust retaining wall system.

Vintagestone offers the structural robustness of an interlocking pin system, while not compromising on elegance and durability. This classic face offers a solution for walls up to 12 metres when suitably designed by an engineer.



Hawkesbury Yellow

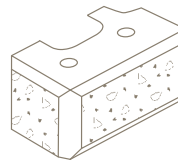


Standard Unit

Size(mm): 455L x 315W x 200H

Weight (each): 41kg

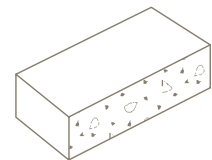
Face area: 11 units per m²



Corner Unit 90°

Size(mm): 455L x 227W x 200H

Weight (each): 41kg

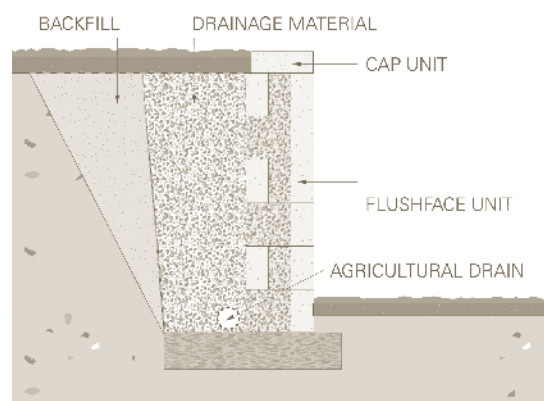


Flushface Straight Sided Cap

Size(mm): 455L x 310W x 100H

Weight (each): 20kg

Typical Cross Section



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

HOW TO LAY RETAINING WALLS

Austral Masonry retaining wall blocks are an ideal choice for retaining walls in gardens, other residential applications and commercial projects. The interlocking and dry stacked nature of these, 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 0.5m 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

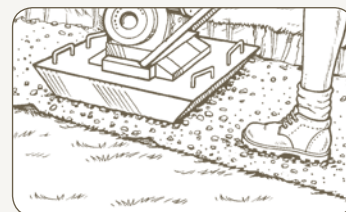
- | | | | |
|--|---|--|--|
| <input type="checkbox"/> String line | <input type="checkbox"/> Shovel | <input type="checkbox"/> Pegs or stakes | <input type="checkbox"/> Mitre saw (to cuts blocks if req'd) |
| <input type="checkbox"/> Tape measure | <input type="checkbox"/> Spirit level | <input type="checkbox"/> Broom | <input type="checkbox"/> 10-20mm Crushed stone (back fill) |
| <input type="checkbox"/> Walling units | <input type="checkbox"/> Wheel barrow | <input type="checkbox"/> Gloves & eye protection | <input type="checkbox"/> Crushed rock (for base) |
| <input type="checkbox"/> Compaction Tool | <input type="checkbox"/> Agriculture Drain Pipe | | |

Step 1: Permits

Check with your local council to ensure all local Building Codes are complied with.

Step 2: Foundation

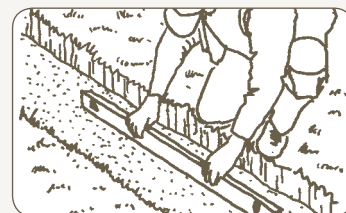
The foundation material shall be compacted by several passes of a mechanical plate vibrator. Where there are significant variations of foundation material or compaction, soft spots, or where there is ponding of ground water, the material shall be removed, replaced and compacted in layers not exceeding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



Step 3: Bearing Pad

The facing shall be built on a bearing pad, not less than 150mm thick & 600mm wide, consisting of one of the following options:

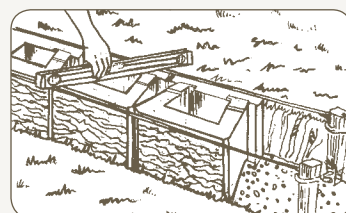
- Compacted crushed rock, well-graded and of low plasticity (without clay content), compacted by a plate vibrator;
- Cement-stabilized crushed rock, with an additional 5% by mass of cement thoroughly mixed, moistened and compacted by a plate vibrator; or
- Lean-mix concrete with a compressive strength of not less than 15 MPa.



Step 4: First Course

Spread 25mm of metal dust with an additional 5% by mass of cement over the compacted base. The first course is now bedded into the metal dust. 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).

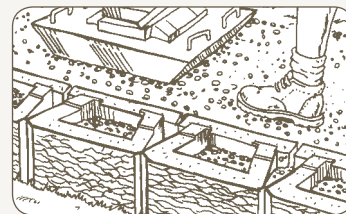
For walls up to 1 metre high, make sure at least 100mm of the first-course blocks are buried below the finished ground level. Allow 200mm for walls over 1 metre high and up to 3 metres high. These walls will need to be engineered.



Step 5: Drainage and Back Fill

Place 100mm 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 300mm using 10-20mm 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.

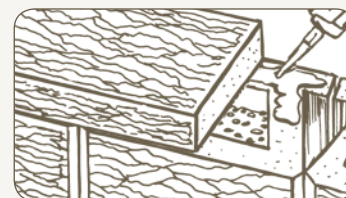


Step 6: Laying Additional Courses

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 300mm. Stack units, placing drainage aggregate and compact backfill for each block layer until the wall is complete.

Step 7: Capping Units

Once backfilling and cleaning is completed as per Step 5 and Step 6 fix the purpose made Capping Blocks with cement based 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 urges you to ensure that you obtain appropriate professional advice tailored to your circumstances before commencing retaining wall projects.

Austral Masonry Product	Maximum wall height
Arrinastone	600mm
Grandstone	972mm
Valleystone	1000mm
Vintagestone	1200mm*
Keystone	1200mm*

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

* Vintagestone and Keystone can be built up to 12m high when designed by a suitably qualified engineer and combined with soil reinforcement. Please contact your Austral Masonry representative for more information.

Note:

Please consult with regulating council for local design requirements prior to the construction of any retaining wall. Councils in general require that retaining walls be designed and certified by a suitably qualified engineer where the wall is over 0.5m in height and/or where there is a surcharge loading, such as a driveway, house or other structure near the wall.

SUITABLE FOR:

- Pedestrian
(Paths, Patios & Courtyards)
- Driveway
- Pools



Above: Camino 50 - Charcoal

Camino 50

Small format paver.

The Camino 50 paver offers a small format paver ideal for driveways, paths and pool surrounds. These versatile pavers offer easy installation with a contemporary finish.



Charcoal



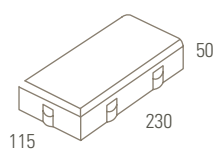
Nutmeg



Almond



Sandune



Camino 50

38.5 units per m²



SUITABLE FOR:

- Pedestrian
(Paths, Patios & Courtyards)
- Pools
- Corners
- Bullnose
(For steps & pool surrounds)

Above : Broadway 400 - Sandune & Arrinastone - Nougat.

Broadway 150*, 300 & 400

Style with impact.

For contemporary styling with impact, the Broadway range of pavers offers sharp contemporary lines and colours, ideal for everyday living ideas, in courtyards, paths and other outdoor spaces.



Charcoal



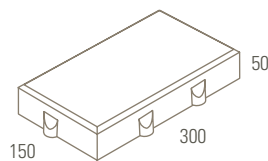
Nutmeg



Almond



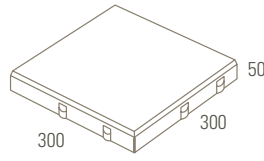
Sandune



Broadway 150

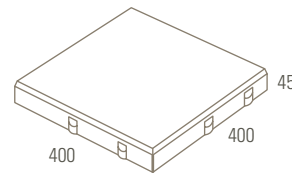
22.2 units per m²

* Only available in Charcoal or Almond Colour



Broadway 300

11.11 units per m²



Broadway 400

6.25 units per m²



A

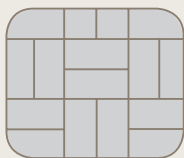


B

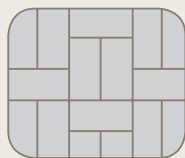


C

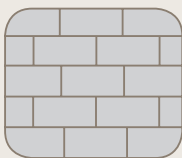
How to Pave. A Step-by-Step Guide



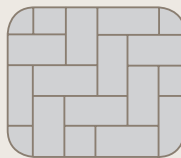
Basket



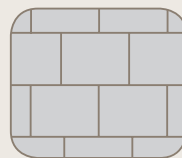
Weave Variation



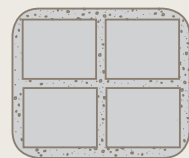
Running Bond



Herringbone 90°



Running Bond
(Large Format)



Even Spaced
(Large Format)

Materials Needed

- Pavers
- Gravel Roadbase (1m³ covers 10m² at a compacted depth of 100mm)
- Washed River Sand (1m³ will cover 30m² at a depth of 30mm)
- Bagged paver jointing sand (1 bag will cover 8m²)
- String lines, tape measure and pegs
- Spirit level
- Two Screed Rails – two flat steel bars (Approx. 3m [L] x 50mm [W] x 2mm [H])
- 2-3m long concrete's screed
- Broom, rake and shovel
- Plate vibrator compactor
- Edge restraints (concrete or timber)
- Cutting Equipment – Paver Splitter/Masonry Brick

Preparation

1. Select the desired finished surface level of your pavers. See diagram 1 above right.
2. Excavate the total area to the required depth – 140mm for pedestrian areas (compacted road base recommended) 190mm for driveways (concrete base recommended for heavy loads).
3. Be sure to allow for a slight fall for drainage. A fall of 25mm per metre should be satisfactory.
4. Place and screed gravel roadbase over area to approximately 100mm below the required finished height. (This allows 10mm for compaction).
5. Using the Vibrator Compactor, compact the roadbase.



Diagram 1 >

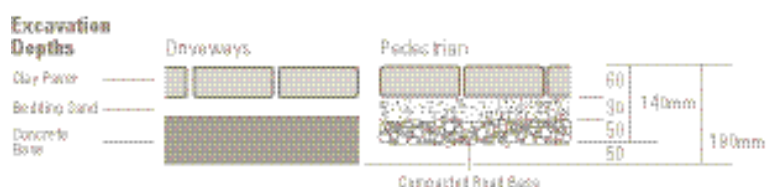


Diagram 2 >



Bedding

1. Place washed river sand in piles over the area to be paved.
2. Using a rake or shovel, spread the sand evenly over the area.
3. Use a paver to determine your finished surface height, to ensure the correct depth of the bedding sand is used. This becomes the measure for your screeding rails. Repeat so that you have 2 paver pads at least 2 metres apart. See Figure A.
4. Using your screed, level an area between the two pavers so that you can lay your screeding rails on the level surface.
5. Place the screeding board onto the screeding rails and pull towards you, ensuring that you maintain an even level. See Figure B.
6. Once the area has been screeded, carefully remove the screeding rails and smooth out any damaged surface areas with a hand float.

Laying Pavers

1. Select your laying pattern and commence laying, making sure that you work outwards from a corner. Where necessary use string lines to make a corner.
2. To ensure that your paving lines stay straight, both vertical and horizontal string lines should be used. See Figure C.
3. As you lay your pavers, make sure that a gap is placed between them (2-3mm for small format pavers and 4-6mm for large format pavers). This will prevent any paver damage caused by pavers rubbing against each other.

Edge Restraints

1. Edge restraints are important as they will prevent pavers from moving out of place. See diagram 2 above.
2. The edge restraint must first be in place prior to compaction taking place.

Compacting the Pavers

1. Prior to compacting, sweep dry paver joint sand over the paved area using a soft bristled brush. Make sure that you completely fill the jointing gaps. See Figure D.
2. Leave a small excess of sand on the surface of the pavers for the compactor to vibrate further into the joints.
3. Before compacting, make sure that a piece of carpet or rubber mat is under the compactor to prevent the pavers being scratched or damaged. See Figure E.
4. 3-4 passes with the compactor should be satisfactory. After the initial pass, respread the jointing sand over the pavers to ensure full joint penetration. Following the final pass, top up any joints with sand where necessary.
5. Hose off excess sand for a clean finish. See Figure F.



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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 AS467B Earth Retaining Structures as being where failure would result in minimal damage and/or loss of access.

A division of

BRICKWORKS
BUILDING PRODUCTS

 **australmasonry®**

The product images in our brochures give a general indication of colour for your preliminary selection. We recommend you also view current product samples before making your final selection. Printed February 2013.

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