



Residential Paving Installation

C&M Pavers can be laid by two methods; Rigid Installation (with a concrete basecourse) or Flexible Installation (a granular basecourse). Properly constructed rigid pavements can be more stable where soil conditions are poor, (e.g. reactive or poorly drained clay).

Drainage is most important for a successful paving project. Care must be taken to grade the basecourse and the finished pavement level at a minimum gradient of 2% (or 100mm per 5.0 lineal metres). Refer to the CMAA's MA44 document for further drainage details.

The laying of pavers on a sand bed on a concrete slab is not addressed in this brochure. It can be done, but efflorescence staining can occur on pavers laid in this manner if there is inadequate drainage of the concrete slab.

For further information please refer to: C&M Paving Installation Guide at www.cmbrick.com.au and Concrete Masonry Association of Australia (CMAA) Guidelines at www.cmaa.com.au :- T45 Concrete Segmental Pavements - Design Guide for Residential Accessways and Roads, MA44 Concrete Flag Pavements - Design and Construction Guide.

NOTE: The following is a guide only and in no way replaces the services of a professional design consultant.

Flexible Installation

Step 1, Excavation: Excavate your area to allow for a granular* basecourse, (75mm for pedestrian traffic and 100mm for driveways **after** compaction), plus 20-25mm of washed coarse bedding sand plus the thickness of the paver. *Note: Pavers for driveways should be at least 50mm thick.*

*Class A road-base or 20mm graded crushed rock are suitable materials.

Step 2, Compact the Basecourse: Place the granular basecourse to the desired depth and compact using a vibrating plate machine. Ensure your basecourse is firm and of uniform thickness. If the area needs to be built up then do so in compacted 75mm layers. Up to 5% of cement can be blended in to the granular basecourse for more stability if required.

Step 3, Bedding Course: Spread clean coarse bedding sand over the compacted basecourse to a depth of 25 - 35mm and screed to a flat even surface.

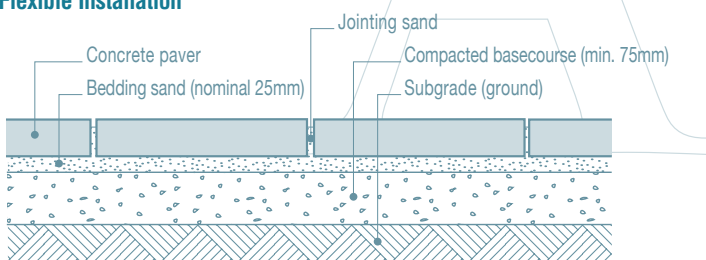
Step 4, Lay the Pavers: Begin laying pavers from one corner, utilising a string line to keep the lines straight. Don't walk on the sand, walk on the pavers already laid.

Step 5, Edging: Edge restraints are essential to prevent lateral movement of the paved area and must be installed prior to the application of the jointing sand. Refer to the Edging section for details.

Step 6, Joints: C&M Pavers in this application should be laid with a 3 - 4mm gap. Fill this joint with a fine washed sand or specialised jointing sand as the paving proceeds. This will minimise movement in the pavers when compacting.

Step 7, Final Compaction: To compact the pavers place a flat heavy board across the pavers and hit with a rubber mallet. For pavers of 50mm depth or greater, a vibrating plate machine should be used for the best results (more jointing sand should be added as pavers are compacted). It is recommended a piece of carpet be placed under the plate to protect the pavers from chipping.

Flexible Installation



Typical Cross Section

Rigid Installation

Step 1, Excavation: Excavate your area to allow for a 75mm thick, (or 100mm for a driveway) concrete slab, (rough screeded 20MPa grade with F62 reinforcement at mid-depth and contraction joints at 3 metre centres), plus 15-25mm of mortar plus the thickness of the paver. *Note: Pavers for driveways should be at least 50mm thick. The concrete should be wet cured for at least 7 days before laying.*

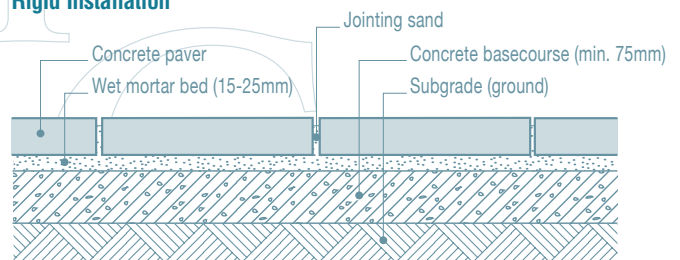
Step 2, Apply the Bond Coat: Prepare a cement slurry by mixing 6 parts fine washed sand to 1 part cement. Apply a thin coat (about 1mm) to the working area of the slab with a broom and to the underside of each C&M paver just prior to laying.

Step 3, Lay the Pavers: Using a string line to keep the lines straight, lay the pavers on a wet mortar bed of 15-25mm thickness. Mortar should be mixed at a ratio of 3 parts washed concrete sand to 1 part cement. Do not make the mortar too wet. The mortar should be stiff enough to make a fist sized ball which holds its shape. Pavers should be laid to form a smooth finished surface by using a level and lightly tapping with a rubber mallet. *Note: Do not add extra water to retemper any stiffening mortar. Make a fresh batch instead; enough to last 30 - 45 minutes laying.*

Step 4, Joints: C&M pavers can be laid butt-jointed, however a fine washed sand or specialised pavement sand is recommended to fill any small gaps. For wider joints, (e.g. >4mm) a non-shrink grout may be used, but be careful not to smear any on the pavers. If any does get on wash off quickly with water and a clean sponge.

Notes: Do not bridge pavers over the contraction joints in the concrete. Pavers must be cut and the joints filled with a flexible compound as per Engineers specifications. If any mortar is spilled on the pavers during installation remove immediately using a clean sponge and water. Do not traffic finished pavement for 72 hours.

Rigid Installation



Typical Cross Section

Calculate Pavers Needed

The quantity of pavers needed will depend on the area to be paved, and the paver chosen.

Work out the area to be paved in square metres. Length(m) x width(m) = area(m²)

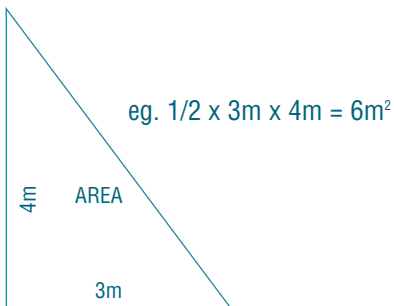
For rectangular areas:



eg. 3m x 5m = 15m²

For triangular areas:

1/2 x base(m) x height(m) = area(m²)



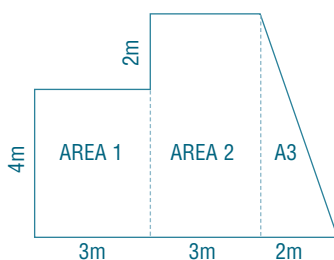
For odd shaped areas: break into sections.

Area 1: 4m x 3m = 12m²

Area 2: 6m x 3m = 18m²

Area 3: 1/2m x 6m x 2m = 6m²

Total area to be paved = 36m²



Note 1: For those who calculate using feet and inches calculate the total area into square feet by using the same method as above and then multiply by .0929 to convert to square metres.

Note 2: When calculating pavers needed add an additional 5%. Allowing for complexity of the design, cuts and breaks.

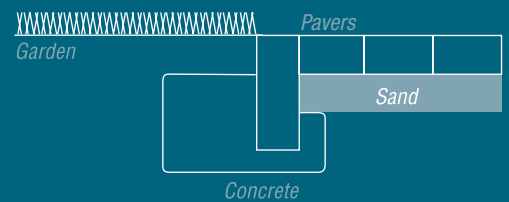
Paver Cutting

You will generally find that some cutting of pavers will be required to fit into specific areas. An angle grinder with a masonry blade is suitable for good results. On jobs where a high number of cuts are required or the paving units are large, it is easier to hire a brick saw with a diamond blade.

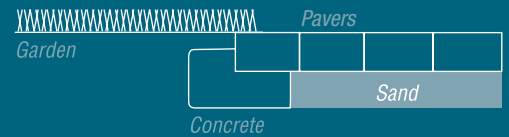
Edging

It is important to have a good edge restraint to stop the pavers from spreading and to ensure that the bedding sand is not washed away. Here are two general techniques.

By embedding a paver on edge in concrete



By embedding the outside paver in concrete to approximately half the height of the paver and back filling with suitable garden material



Swimming Pools

- C&M pavers have a non slip surface which is ideal for swimming pool surrounds.
- C&M pavers while being strong and durable have a soft feel, making them comfortable under bare feet or for sitting along pool edges.
- C&M manufacture some pavers specifically for salt resistant applications, necessary for around salt chlorinated swimming pools. This range varies between States so please consult your local C&M distributor or C&M product guide for specific localised advice.
- For added protection C&M recommend sealing pavers likely to be subjected to salt attack.

Maintenance

Pavers will require some ongoing maintenance to keep looking in a pristine condition. Dirt and dust should regularly be removed whilst any weed growth should be sprayed and controlled. Ants should not be allowed to nest in base materials.

Cleaning

All pavers will require cleaning from time to time. Oil, rust, efflorescence and other stains can detract from the appearance of the paver. Proprietary cleaning products for concrete pavers (and retaining walls) are readily available. Please contact your local distributor or C&M for further information. **Do not use Hydrochloric Acid.**

Sealing

If a more protective surface is required then C&M suggest you seal your paving. There are a number of sealers specifically for concrete paving so please contact your local distributor or C&M for further information.

Note: All coloured product should be ordered at the one time to reduce the risk of batch variation. No claims will be accepted once product has been installed.