

# Paver Laying Guide



Smooth Natural  
Installed by Innovative Landscapes

Always be sure to check the weather conditions for when you plan to install your pavers. Only install paving in reasonably settled conditions, allowing for a few days of dry weather during and for 48 hours after installation. Rain during or immediately post installation can cause variation in concrete appearance.

Before you start any paving project, it is necessary to carefully plan the work. This guide provides a step by step process taking you from start to finish. A plan of the area to be paved should be accurately drawn and marked out on site. It is important to determine the finished levels of paving when planning the project. Check with your local council on any height requirements specific to your site.



Urban Paving recommend using the professional laying guide to remove variation and provide a better finish.

## Recommended Professional Laying

### Materials Required

The quantity of the materials needed for the paving job depends upon the total area to be paved.

#### Area

The area is simply calculated by measuring the width and length of the area to be paved.

$$\text{Length (m)} \times \text{width (m)} = \text{area (m}^2\text{)}$$

#### Paving Units

Calculate the pavers required.

$$\text{Area to be paved (m}^2\text{)} \times \text{the number per m}^2 \text{ (on page 7)} = \text{total number of pavers required}$$

We advise ordering an extra 3-7% depending on complexity to allow for cuts etc.

#### Base course

A minimum of 100mm of compacted base course (AP20) is required for under paving, this may need to be thicker in some situations (a stable concrete pad can be used instead of base course).

$$\text{Area to be paved (m}^2\text{)} \times 0.1 \text{ (allows for 100mm of base course)}$$

$$\times 1.3 \text{ (allows for compaction)} = \text{m}^3 \text{ of base course required}$$

#### Sand and Cement - Mortar

10-30mm of mortar is required for under paving, depending on the levelness of your base.

1m<sup>3</sup> will cover approximately 30 square metres @ 30mm depth.

$$\text{Area to be paved (m}^2\text{)} \times 0.03 \text{ (allows for 30mm thick sand)} = \text{m}^3 \text{ of sand required}$$

For every m<sup>3</sup> of sand you will need four to five 40kg bags of cement, and it is recommended to add a plasticiser (cemplus, febmix etc).

#### Sand and Cement - Grouting

Grout is used to fill the gaps between the paving units once laid. A scoop (0.3m<sup>3</sup>) of sand and three to four 4kg bags of cement will cover approximately 50 square metres of paving, depending on the size of joint spaces.

### Excavation

It will generally be necessary to excavate the area to be paved. The depth of this excavation will depend on the thickness of the paver, plus the 30mm of mortar and 100mm of compacted base course material if required. Any loose or soft areas in the sub-grade should also be removed and replaced with compacted material.



Excavate the area then fill with basecourse



Compact the basecourse

## Basecourse

Correct base preparation is perhaps the most important part of the paving project.

Like a road, the end product is only as good as the base it is laid on. The base course is a compacted granular fill used to build up areas, set levels and provide a strong, stable layer to support the laid paver. Fill in the base course no thicker than 100mm and compact to a uniform dense condition, especially around manholes and kerbs (if more than 100mm is needed, compact in layers). The finished texture of the basecourse should not allow sand to filter through. The final surface of the basecourse should match the contour of your finished paving, with no bumps, and no holes deeper than 10mm. Please note this can be substituted with a stable and load-bearing concrete pad.

## Preparing the Mortar

Mortar should normally be made at a ratio of 5 parts sand to 1 part cement (more cement may be needed in certain circumstances), mix this in a concrete mixer dry and then slowly add water (and 1-2 caps of plasticiser per mixer load) until you meet the desired consistency. This should be about the consistency of mashed potato, wet enough that it can be tapped down but dry enough to support the weight of the paver. Plasticiser makes the mortar more workable and slows down the curing process, allowing more time to lay the pavers.

## Laying the Pavers

Ensure pavers are laid so water drains off (typically a slope of 1-2%). A free draining base is necessary so the pavers do not have 'wet feet' (can cause excessive mottling). It is generally best to start in a corner or along a straight edge such as the house footing. Set up string lines and place enough mortar on the base to cover the entire area of the paver (this ensures the paver is well supported) and slightly deeper than required. Place the pavers in the desired pattern on the mortar leaving your desired gap (normally approx 10mm) between each paver. Tap the paver into place using a rubber mallet, use string lines, a spirit level and regular visual checking of the paving to keep all the joints straight and the finished product level. Always work from on top of the base course, staying off the pavers that have just been laid for at least 24 hours to allow the mortar to set.

## Cutting the Pavers

Leave cutting and placing of the edge pavers until the last step. Carefully mark the pavers to be cut and use a diamond concrete saw (available to hire from Urban Paving).

## Grouting the Pavers

Grouting should normally be done a couple of days after laying. If you are planning on sealing the pavers it is recommended that the first coat is done before grouting.

Grout should normally be made at a ratio of 2 parts sand to 1 part cement, mix this in a concrete mixer dry and then slowly add water until you meet the desired consistency. This should be fairly dry; wet enough that it can be pressed to create a smooth surface but dry enough to hold its shape. Carefully press this into the paver gaps, packing it down into any voids and then running a grout tool across the top to get a consistent finish. Use a damp sponge to clean off any grout that is on the paver surface. If a coloured grout is desired the oxide powder should be mixed with the sand and cement before any water is added. It is important that mixes are consistent in the amount of sand, cement and oxide used to ensure a seamless grout line.

For recommended contractors please see the information section on our website [urbanpaving.co.nz](http://urbanpaving.co.nz)

**For more help installing your pavers, check out the information we place on every pallet. It contains advice about how to get the best result from your paving and helpful tips to avoid common mistakes.**

If you have any questions about installation or for best product care, please contact the Urban Paving team.

## HELPFUL TIPS

Here are a few tips to help ensure that you produce a first-class job:

- When paving a slope it is important to start at the bottom and pave up the slope.
- It is recommended that the same person mixes all grout and mortar to ensure consistency between batches.
- Do not leave sand, mortar, grout or objects lying on the surface of the pavers for any length of time when initially laid — may cause staining or shadowing.
- If you are sealing your pavers it is recommended that the first coat is applied before grouting.
- For natural stone and outdoor porcelain paving, or if you are laying in dry conditions, paint a slurry (very wet mortar — paint-like in consistency) on the back of the pavers before placing on the mortar bed. Or use Cemix Cemkey Concentrate, this will minimise popping.
- Lay paving only during dry conditions. Laying paving in wet conditions can cause Mottling, Pinto and other surface appearance variations.

Refer to the information section on our website for more details and tips [urbanpaving.co.nz](http://urbanpaving.co.nz)