



A PROFESSIONAL PAVING GUIDE



PROFESSIONAL LAYING GUIDE

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.

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. $\text{Area to be paved (m}^2\text{)} \times \text{the number per m}^2 \text{ (on the price list)} = \text{total m}^2 \text{ of pavers required}$. We advise ordering an extra 3-7% depending on complexity to allow for cuts etc.

➤ **BASE COURSE**

A minimum of 100 mm 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 -30 mm of mortar is required for under paving, depending on the levelness of your base. 1 m³ 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 m³ of sand you will need 4-5 40kg bags of cement, and it is recommended to add a plasticizer (cemplus, febmix etc).

➤ **SAND AND CEMENT - GROUTING**

Grout is used to fill the gaps between the paving units once laid. A scoop (0.3m³) of sand and 3-4 40 kg bags of cement will cover approximately 50 square metres of paving, depending upon the size of joint spaces.

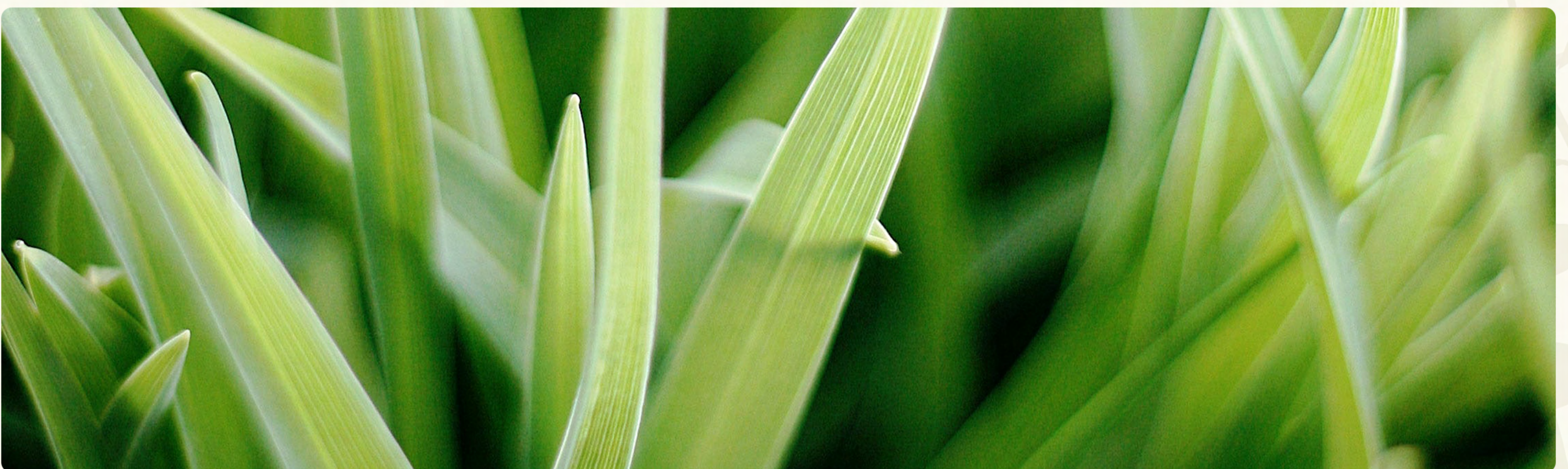
EXCAVATION

It will generally be necessary to excavate the area to be paved. The depth of this excavation will depend upon 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.



BASE COURSE

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 base course should not allow sand to filter through. The final surface of the base course 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 plasticizer per barrow 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. Plasticizer makes the mortar more workable and slows down the curing process allowing more time to lay the pavers.

LAYING THE PAVERS

When laying the pavers 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 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 from most hire centers or contact Urban Paving for details on our cutting service).



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.

HELPFUL HINTS

- Check with your local Council on any legal requirements specific to the site.
- If laying around a building always add a slight slope away from the building to allow runoff.
- When laying the pavers onto mortar always work from on top of the base coarse taking care not to disturb the pavers you have already laid.
- The use of string lines and spirit levels make keeping the pavers level a lot easier.
- When paving a slope it is important to start at the bottom and pave up the slope.
- Pavers can be cut with a diamond concrete saw (available from hire centers).
- It is recommended the same person mixes all grout/mortar to ensure consistency between batches.
- Do not leave sand, mortar or grout lying on the surface of the pavers for any length of time as it may cause staining.
- Leave cutting and laying of the edge pavers until the last job prior to sealing and grouting.
- If you are sealing your pavers it is recommended that the first coat be applied before grouting.
- If laying Indian Sandstone or 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 to minimise popping.