

Installing a Solid Base

Overview

This document details two methods of installing a solid base onto which your slate can be fixed. As this document provides an overview, we suggest that professional advice from your contractor be sought for your individual project as to which method may be more suitable.

Method 1: Cement & sand mix (screed)

General

- For a patio - we would suggest the depth of the screed base is 2-3 inches with at least 3 inches of compacted hardcore underneath.
- We would not recommend this method for a driveway - use method 2 (Concrete base)

Step 1: Gather the raw materials for your screed, Portland cement and sharp sand

Step 2: Build the form to take the screed, brace it off with shuttering to keep the screed in position and use plumb lines to ensure levels / falls are correct. The form (wooden structure) should be built where each bay is no more than 16-20m².

Step 3: Using a portable cement mixer, add 1 part Portland cement to 4 parts sharp sand into the mixer. Turn mixer on and allow it to run for two minutes to thoroughly combine the ingredients.

Step 4: Whilst the mixer is still turning, pour enough water into the mixture, using a garden hose or watering can so that mix becomes damp but not wet. It is best to add small amounts of water at a time so that you reach the desired mix. Turn off the mixer and grab a handful of screed in one hand and squeeze it tightly as if you are making a fist. If the mixture is right, then only one or two drops of water should come out and the mixture should retain a tight ball shape in your hand. If the mixture crumbles, add a little more water. If too much water comes out, add more sharp sand and cement in the ratio given in step 3.

Step 5: Remove the screed mix from the mixer and shovel into a wheelbarrow or directly into the form. Tamp it down until flat, removing air pockets as you work, add more mix to areas if there are gaps. Scrape the surface with a long piece of timber slightly angled to remove the excess.

Step 6: The base will take many days to dry out totally, but you can still fix the slate after 2-3 days (assuming conditions are dry)

Method 2: Concrete Base

General

- For a patio - we would suggest the depth of the concrete base is at least 2 inches with at least 3 inches of compacted hardcore underneath.
- For a driveway we would suggest depth of base 6 inches of concrete as a minimum - no requirement for compacted hardcore underneath if this depth of concrete is used.

Step 1: Gather the raw materials for your screed, Portland cement and Ballast

Step 2: This is the same procedure as above.

Step 3: Using a portable cement mixer, add 1 part Portland cement to 5 parts ballast into the mixer and add clean water in small amounts. Turn mixer on and allow it to run for around three minutes to thoroughly combine the ingredients to form the right consistency - not too wet and not too dry. It is best to add small amounts of water at a time so that you reach the desired mix. The mix should be firm enough so that if you put some in a small can and tipped it over and gently lifted the tin, the mix should retain its shape and gently “slump” away.

Step 4: Place the concrete in the form, tapping all the edges to remove air pockets and settle it down. Level the concrete surface by dragging a long piece of timber angled slightly across the concrete.

Step 5: To create a smooth surface, finish by either brushing or using a trowel as the concrete begins to set or harden.

Step 6: Same as above - the base can be used after 2-3 days (assuming conditions are dry)

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