How to Plan a Concrete Pour for a Patio or Pathway

Getting the Groundwork Right

A concrete patio or pathway can transform a garden, giving it a clean, solid surface that stands up to weather and foot traffic. But the quality of the finished slab depends almost entirely on what happens before the truck arrives. Rushing the planning stage leads to cracks, uneven surfaces, and a job that needs redoing far sooner than it should. Here is how to approach the process step by step, with the key points to watch at each stage.

Step 1: Mark Out the Area and Check the Fall

Start by deciding exactly where the concrete will go. Use pegs and string lines to mark the outline, and lay a hose or rope on the ground to visualise curves if your pathway bends. For a patio, aim for a slight slope away from the house - roughly 1:80 (about 15 mm per metre) - so rainwater runs off rather than pooling against the building. Check the fall with a straightedge and spirit level before you dig. On a pathway, a gentle crossfall to one side works well, or you can crown the centre so water sheds to both edges.

Step 2: Excavate to the Right Depth

The hole you dig must be deep enough to accommodate both the sub-base and the concrete slab. For a patio that will take foot traffic and garden furniture, a total depth of around 150 mm is typical: 100 mm for the sub-base and 50 mm for the concrete. For a driveway or area that will see vehicle loads, the concrete thickness needs to be greater, but for patios and pathways the figures above are a sensible starting point. Dig out the topsoil and any soft ground until you reach a firm, undisturbed base. Remove all turf, roots, and large stones. The bottom of the excavation should be level, with the fall already cut into it. If you hit a patch of clay or very loose ground, you may need to dig deeper and add extra sub-base to spread the load.



Step 3: Prepare a Solid Sub-Base

The sub-base is the foundation that stops the concrete slab from settling and cracking. Spread a layer of hardcore or crushed stone - typically 50 mm to 100 mm down, depending on your ground conditions. Compact it thoroughly with a plate compactor (a whacker plate). Run the compactor over the whole area in overlapping passes until the stones stop shifting and the surface feels firm underfoot. A poorly compacted sub-base will let the slab sink, no matter how well the concrete is mixed. This is especially important if your ground is heavy clay or has been recently disturbed. For a garden pathway, you can often get away with a thinner sub-base, but never skip the compaction step.

Step 4: Set Up Formwork

Formwork is the temporary frame that holds the wet concrete in shape until it sets. Use timber boards that are straight and free from large knots; 25 mm thick planks are common for patios. Cut them to length and peg them into the ground along the edges of your excavation, making sure the tops of the boards are at the finished height of the concrete, including the fall. Nail or screw the boards to wooden pegs driven into the ground outside the pour area. Check every

board with a spirit level - both horizontally and along the fall. The formwork must be rigid; any flex during the pour will ruin the slab's shape. On a curved pathway, you can use flexible hardboard or plywood cut into narrow strips, but keep the pegs close together to hold the curve.

Step 5: Add Reinforcement (If Needed)

For a straightforward garden path or a small patio, reinforcement is often unnecessary if the ground is stable and the slab is thick enough. But on larger patios (say, over 3 metres in any direction) or on ground that moves, steel mesh or fibre reinforcement helps control cracking. If you use mesh, lay it on plastic spacers or small stones so it sits in the middle of the slab depth, not on the bottom. For pathways, a single sheet of mesh running the full length is enough, but you need to overlap sheets by at least one square and tie them with wire. Fibre reinforcement is mixed into the concrete itself and can be simpler to handle, but it does not replace a proper sub-base.

Step 6: Order the Right Concrete Mix

Not all concrete is the same. For a patio or pathway, you want a mix that is workable enough to spread and level but not so wet that it slumps or bleeds water. A standard C20 or ST2 mix is usually suitable for domestic paths and patios. If your supplier offers a pump mix for awkward access, that can save a lot of barrowing. Discuss the pour with your supplier beforehand: tell them the volume, the access route, and the weather forecast. They can advise on the right slump and whether you need additives for cold or hot weather. This is also the moment to think about colour - integral pigments can be added to the mix if you want something other than grey. But for most projects, plain grey concrete for a durable garden base is all you need, and it will weather to a natural, unobtrusive finish.



Step 7: Plan the Pour Day

Concrete starts setting as soon as it is mixed, so the pour needs to be well organised. Have your tools ready: a shovel, a rake, a straightedge (a long, straight timber or aluminium bar), a float or trowel, and a brush for the final finish. Make sure you have enough helpers - at least two people for a small patio, more for larger areas. The concrete should be placed as close to its final position as possible; moving it too far with a rake or shovel can cause segregation, where the stones sink and the cement paste rises to the top. Work in sections if the area is large, but keep each section small enough that you can level and finish it before the concrete stiffens. If the weather is hot, the concrete will set faster, so you may need to work quicker or order a retarding admixture. In cold weather, have insulation or hessian sheets ready to cover the slab after finishing.

Step 8: Spread, Level, and Compact

Shovel the concrete into the formwork, starting at the far end and working back towards the access point. Use a rake to spread it roughly level, then use a straightedge - laid across the formwork boards - to screed the surface. Move the straightedge in a sawing motion, pulling it

towards you. This fills any hollows and cuts off the high spots. After screeding, use a bull float or a large trowel to smooth the surface and bring the fines (the cement paste) to the top. Do not overwork it; too much floating can weaken the surface. For a non-slip finish on a pathway, run a stiff broom across the surface once the water sheen has disappeared, dragging it in straight lines perpendicular to the direction of travel. For a smooth patio finish, wait until the concrete has taken its initial set, then trowel it to a closed, even surface.

Step 9: Cure the Concrete Properly

Curing is the most overlooked step, yet it makes the difference between a surface that lasts for decades and one that dusts and cracks within a year. Concrete gains strength through a chemical reaction that needs moisture. If the surface dries out too quickly, the reaction stops and the top layer becomes weak and crumbly. After finishing, cover the slab with polythene sheeting, damp hessian, or a curing compound. Keep the cover in place for at least three to seven days. In hot or windy weather, mist the slab lightly before covering and check that the cover stays in place. Do not walk on the concrete for at least 24 hours, and keep heavy loads off for a week. For a pathway, you can lay temporary boards across it after three days if you must cross it, but treat the surface gently.

Step 10: Strip Formwork and Finish Edges

After the concrete has cured enough to hold its shape - usually after about three to seven days - you can remove the formwork. Gently tap the boards loose with a hammer, taking care not to chip the fresh concrete. Use an edging trowel or a concrete edging tool to round off the sharp corners; this prevents chipping later. If you want a decorative edge, now is the time to add it. Fill any small voids around the edges with a sand-cement mix if needed. The slab is now ready for use, though it will continue to harden for several weeks.



Step 11: Maintain the Surface Over Time

A concrete patio or pathway needs surprisingly little maintenance. Sweep off debris regularly to stop organic matter from staining the surface. In winter, avoid using de-icing salts that contain ammonium nitrate or ammonium sulphate - they can attack the concrete. Plain salt or sand is safer. If you sealed the concrete with a penetrating sealer after curing, reapply it every couple of years to protect against stains and frost damage. But many people find that untreated concrete weathers well, developing a subtle patina that blends into the garden. The key is to have done the groundwork properly in the first place.