Planning a concrete pour for a patio or pathway

Getting the groundwork right before you pour

A concrete patio or pathway can transform the way you use your garden. It provides a solid, level surface that lasts for decades when done properly. But the difference between a result that stays flat and crack-free and one that sinks or breaks up within a few years comes down to the planning before the truck arrives. Rushing the preparation is the single most common mistake, and it is almost impossible to fix after the concrete has set.

This article walks through the key steps for a successful pour, from marking out the area to finishing the surface. Each stage has its own pitfalls, and knowing what to watch for at each one will save you time, money, and a lot of frustration.

1. Marking out and excavating the area

Start by deciding the exact shape and size of your patio or pathway. Use pegs and string to mark the boundaries, and check that the route or area works with the natural flow of your garden. For a pathway, consider the width: a single person needs about 600 mm, while two people walking side by side need roughly 900 mm. A patio should be large enough for your planned use, with a little extra space for furniture and movement.

Excavate the ground to the required depth. The total depth needed depends on the thickness of the concrete slab and the sub-base beneath it. For a domestic patio or pathway, a slab thickness of 100 mm is typical, with a sub-base of compacted hardcore or crushed stone around 75 mm to 100 mm deep. That means you need to dig out roughly 175 mm to 200 mm in total, plus a little extra for the slab to sit above the surrounding ground level. Watch out for tree roots, utility pipes, and cables during digging. If you encounter any, stop and consult a professional before proceeding.

2. Preparing the sub-base

The sub-base is the foundation that supports the concrete slab and spreads the load evenly. Without it, the slab can crack or sink over time, especially in clay soils or areas with frost. Spread a layer of hardcore or MOT Type 1 stone across the excavated area, and compact it thoroughly with a plate compactor or a hand tamper. The surface should be level and firm underfoot.



One important detail: the sub-base must be sloped slightly away from any buildings or structures to ensure water drains off, not towards them. A fall of about 1 in 80 (roughly 12.5 mm per metre) is standard. Check this with a long spirit level and a straightedge. If you are working on a pathway that runs alongside a house or wall, the fall should go away from the wall. On an open patio, you can slope the surface in one direction or create a gentle crown in the middle so water runs to both sides.

3. Setting up formwork

Formwork is the temporary frame that holds the concrete in place while it sets. For most domestic jobs, timber planks (50 mm x 100 mm or similar) work well. Cut them to length, fix them with pegs driven into the ground, and make sure the top edges are at the finished height of the slab. Use a spirit level to check that the formwork follows the slope you planned for drainage.

Watch out for gaps between the formwork and the ground. If there are large gaps, concrete can escape and leave a messy edge. Fill them with soil or sand before pouring. It is also worth

oiling the inside face of the formwork with a release agent so the timber comes away cleanly after the concrete has set.

4. Adding reinforcement

Reinforcement helps the concrete resist cracking caused by ground movement or heavy loads. For a patio or pathway, steel mesh or a grid of steel reinforcing bars (rebar) is common. Place the reinforcement in the middle of the slab thickness, not at the bottom. That means you need to support it on plastic chairs or small stones so it sits about 50 mm above the sub-base.

If you are using mesh, overlap the sheets by at least one square and tie them together with wire. For rebar, space the bars at roughly 200 mm centres in both directions. Reinforcement is not always necessary for very small areas or paths that will see only foot traffic, but it adds a lot of strength for a modest cost. On larger patios or driveways, it is strongly recommended.

5. Ordering the concrete

Once the formwork and reinforcement are ready, you can calculate the volume of concrete you need. Multiply the length, width, and thickness of the slab in metres to get cubic metres. Add about 10% extra for waste and spillage. For example, a patio that is 5 m by 4 m with a 100 mm thick slab needs roughly 2.2 cubic metres (5 x 4 x 0.1 = 2.0, plus 10% = 2.2).

Choose a mix suitable for the job. A standard C20 or C25 mix works well for patios and pathways. If the area will take vehicle traffic, consider a higher strength mix. A ready-mix supplier can advise on the right specification for your project. When ordering, give the supplier clear access for the delivery truck and have a plan for moving the concrete from the chute to the formwork if the truck cannot reach directly.



6. Pouring and spreading

Pour the concrete into the formwork in a continuous operation, working from one end to the other. Do not start and then stop for a long break, as the concrete can begin to set unevenly. Spread it with a shovel or a rake, and use a tamping tool or a vibrating poker to remove air pockets. Pay special attention to corners and edges where voids are more likely.

As you fill each section, strike off the excess concrete using a straight board that spans the formwork. Move the board in a sawing motion across the top to level the surface. This step is called screeding, and it determines the final flatness of the slab. If you are working alone, it helps to have a second person to keep the concrete coming while you screed.

7. Finishing the surface

After screeding, the surface needs to be finished to suit your use. For a smooth finish, use a steel trowel. For a non-slip surface on a pathway or patio, a broom finish is better: drag a soft broom across the surface after it has hardened slightly but is still workable. This leaves fine grooves that improve grip when wet.

For a pathway, you may also want to add expansion joints. These are grooves cut or formed into the slab every 2 to 3 metres to control where cracks happen. You can use a jointing tool while the concrete is still soft, or cut them with a concrete saw the next day. Without expansion joints, a long slab will crack randomly as it shrinks during curing.

8. Curing the concrete

Curing is the process of keeping the concrete moist while it gains strength. It is often overlooked, but it is critical. If concrete dries out too quickly, it will be weaker and more prone to cracking. Cover the slab with plastic sheeting, damp hessian, or a curing compound, and leave it undisturbed for at least 7 days. In hot or windy weather, check that the covering stays damp and does not blow off.

During the first few days, keep foot traffic off the slab entirely. Light use may be possible after about a week, but full strength takes 28 days. If you need to use the pathway sooner, consider a fast-curing mix or a curing accelerator, but follow the supplier's instructions carefully.

Watching for common problems

Several issues can arise despite good planning. If the ground is soft or poorly compacted, the slab may sink or crack. If the sub-base is not thick enough on clay soil, frost heave can lift the slab. If the concrete mix has too much water, the surface will be weak and dusty. If you pour in very hot weather, the water can evaporate too fast and cause surface cracking. If you pour in freezing weather, the water can freeze and damage the slab before it sets.



Each of these problems has a solution, but the best approach is to avoid them by planning for the conditions. Check the weather forecast a few days ahead, and postpone the pour if extremes are expected. Use a plastic sheet to cover the fresh concrete if rain is forecast within a few hours of pouring.

Using concrete for a durable garden base

A well-planned concrete pour gives you a surface that stands up to years of use without major maintenance. Whether the project is a patio, a pathway, a shed base, or a garage floor, the same principles apply: proper excavation, a compacted sub-base, correct formwork, reinforcement where needed, and thorough curing. When you choose concrete for a durable garden base, you are investing in a permanent structure that can handle foot traffic, garden furniture, and occasional vehicle loads without complaint.

The key is to take your time on the preparation and not cut corners. Every hour spent getting the ground ready and the formwork level saves days of repair work later. With careful planning, your concrete pour will be a straightforward job that delivers a result you can rely on for decades.