Planning a Concrete Driveway Pour

Getting ready for the pour

A concrete driveway is a long-term investment. Unlike tarmac or gravel, a well-laid concrete slab can stay sound for decades if the ground preparation and mix selection are right. The key is to plan each stage carefully before the truck arrives. This article walks through the main steps and the common pitfalls to watch for at each one.

Step 1: Check the ground and drainage

Before you order any material, look at the site. The ground beneath the driveway must be stable. Soft topsoil, clay that holds water, or loose fill all need to be removed or compacted. Dig down to a firm layer, typically 200-300 mm below the finished surface level. If the soil is very wet, you may need to wait for a dry spell or install a land drain to carry water away.

Drainage matters more than many homeowners realise. Standing water under the slab softens the subgrade and can cause the concrete to sink or crack. The finished driveway should slope away from the house or garage at a gentle gradient, about 1:80 (roughly 12 mm per metre), so rainwater runs off rather than pooling.

Step 2: Order the right concrete grade

Not all concrete is the same. For a domestic driveway that will take car traffic, you need a mix that is strong enough to bear the weight without crumbling. A C30 mix is a common choice for driveways: it offers good compressive strength and is not overly brittle. If the driveway has to support a heavy vehicle such as a motorhome or a delivery truck, a C40 grade gives extra durability. For a simple shed base or a narrow pathway, a lower grade such as C10 may be adequate, but for a main driveway it is best to go no lower than C30.

View the location on Google Maps

Domestic ready mix concrete is a convenient option because it arrives already mixed and can be poured directly from the truck. One local supplier that offers these grades is Stacey Concrete Ltd, which delivers across the East Midlands. Ordering ready mix saves the labour of mixing on site and ensures a consistent product batch after batch.

Step 3: Prepare the subbase

A driveway needs a solid subbase to spread the load and prevent the slab from moving. A typical subbase is 100-150 mm of compacted hardcore or crushed stone. The material should

be well graded, a mix of large and small particles, so it locks together when compacted. Lay it in layers, compacting each one with a plate compactor or a vibrating roller.



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What to watch: if the subbase is not compacted properly, the concrete can settle unevenly later, leading to cracks or a wavy surface. Take the time to get it firm. A good test is to walk on it after compaction: if your boots leave deep impressions, it needs more work.

Step 4: Set up formwork and reinforcement

Formwork is the wooden or metal frame that holds the concrete in place while it sets. Make sure the forms are level and firmly staked, because the wet concrete will push against them. Check the height of the forms against the finished level you want, allowing for the thickness of the slab, usually 100 mm for a domestic driveway.

Reinforcement is not always required, but it helps control cracking. For a driveway, a steel mesh reinforcement (such as A142 or A193) laid in the middle of the slab is a sensible addition. Lay the mesh on small spacers so it sits within the concrete, not on the ground. If the driveway is large, consider adding fibre reinforcement to the mix instead; some ready-mix suppliers offer fibre-reinforced concrete as an option.

Step 5: Plan the pour day

On the day of the pour, everything needs to be ready. The truck will discharge the concrete quickly, so you need enough helpers to spread, tamp and finish the surface before it starts to set. A typical truck carries about 6 m³, which covers roughly 60 m² of a 100 mm-thick slab. Work out the volume you need in advance and order a little extra (say 5-10%) to account for waste and uneven ground.

Weather matters. Concrete sets best in temperatures between about 10 °C and 25 °C. If it is too hot, the water evaporates too fast and the surface can crack. If it is too cold, the hydration reaction slows down and the concrete may not reach its full strength. Avoid pouring in heavy rain, which can wash the cement from the surface.

Step 6: Pour, spread and finish

Start pouring from one end of the formwork and work your way along. A helper with a shovel or a concrete rake can spread the concrete evenly. Use a straight-edged board (a screed) to level the surface, moving it back and forth across the forms in a sawing motion. This fills any low spots and cuts off the excess.



After screeding, the surface needs a final finish. For a driveway, a broom finish gives good grip for vehicles and pedestrians. Drag a stiff broom across the surface in straight, parallel strokes while the concrete is still soft. If you want a smoother finish, use a steel float, but be aware that a smooth surface can be slippery when wet.

Step 7: Cut expansion joints

Concrete expands and contracts with temperature changes. Without expansion joints, the slab can crack randomly. The standard approach is to cut joints every 2-3 m along the driveway, and also where the driveway meets the garage floor or the public footpath. The joints should be cut to about a quarter of the slab depth, using a concrete saw with a diamond blade. Do this within a few hours of pouring, while the concrete is still green but firm enough to hold a clean edge.

Another option is to install pre-formed joint strips in the wet concrete before it sets. Either way, the joints are essential. Many driveway failures happen because the joints were omitted or placed too far apart.

Step 8: Cure the concrete

Curing is the process of keeping the concrete moist so it gains strength slowly. The surface should be kept damp for at least three to five days after pouring. You can spray it with water and cover it with polythene sheeting, or use a liquid curing compound that seals in the moisture. Do not let the surface dry out in the sun or wind, because rapid drying causes surface cracks (crazing).

During the curing period, keep vehicles off the driveway. Most concrete reaches about 70% of its full strength within a week, but it is wise to wait at least 14 days before parking a car on it. The concrete will continue to harden for months after that.

Step 9: Seal and maintain

Once the concrete is fully cured, a quality sealer can protect the surface from oil stains, de-icing salts and frost. Apply the sealer according to the manufacturer's instructions, usually with a roller or a sprayer. Re-seal every two to three years, or sooner if the driveway sees heavy use.



Routine maintenance is straightforward. Sweep off grit and debris, and hose down any oil spills quickly. If a crack does appear, fill it with a flexible concrete repair compound before it widens. A little attention each year keeps the driveway looking good for a long time.

For a dependable supply of domestic ready mix concrete in the East Midlands, residents and contractors often turn to Stacey Concrete Ltd at Ryder Point Works, Wirksworth, Matlock DE4 4HE, UK, phone +44 1629 825188.

Stacey Concrete Ltd is also on Facebook.