

ECOMAX

HIGH PERFORMANCE

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LOW-CARBON

Managing
your next
**Concrete
Project.**



Plan Your Project

- ▶ Patios, paths driveways and pool surrounds should be at least 80mm but are better at 100mm.
- ▶ Consider using DPM (plastic sheet) for patios, paths and driveways: this eliminates moisture movement which can sometimes contribute to colour variation.
- ▶ Use bar chairs to keep mesh at the right level.
- ▶ Use 665 mesh. 668 is cheaper but has just over half the restraint of 665
- ▶ Plan where cuts are to be made.
- ▶ Don't use polypropylene/plastic fibres as a mesh replacement. It is our belief that olypropylene fibres help only with early age cracking reduction and are not suitable to replace mesh.



Choosing a Contractor

The contractor, not the concrete itself, has the **biggest influence** on the outcome of a project and so they must be chosen carefully.

No matter if you're interested in a driveway, patio, walkway, or other type of project, there are plenty of professionals out there who can help you.

However, because there is no licence or qualification required for a contractor doing exterior work, nor is there a NZ standard, it's important to choose a contractor that will do a **thorough and proper** job.

Hiring a concrete contractor is more than just finding a name on an internet search or choosing the lowest price. If you want to ensure your project gets done on time, on budget, and with quality in mind.

Use the following tips (see next page) to make the right decision...



Do your research.

Before you hire anyone, you need to do your research. A simple internet search will give you a list of potential contractors in your area but consider also asking friends and family members for referrals.

If you contact your local Bridgeman Concrete plant, they can refer you to concrete contractors who have a good reputation.

Ask for and contact references.

Before you sign any contract, always ask the contractor for a list of references, and then contact those references to learn more about the contractor and their operation.

Be sure to ask questions regarding the type of project, the length of the project, the contractor's communication and involvement, and the referee's overall opinion.

Go with your gut feel.

You can tell a lot about someone by the way he or she acts.

Consider choosing a contractor that has a friendly demeanor, is willing to spend time meeting with or talking with you, answers your questions, and gets back to you in a timely fashion.

This type of interaction can go a long way in proving their dedication and quality. If the contractor seems hesitant to answer any questions, doesn't call you back, or seems standoffish in any way, consider it an unprofessional sign and move on.

Choosing the right contractor is essential to getting a great finished concrete project. When considering your options, be sure to use these tips to make the best choice.



Look for experience.

You want to ensure you choose a contractor who has experience. Try to choose one who has been in the business for at least **five** years, as this will give you some level of stability and reliability.

Experienced contractors will actively be a part of your project while also providing insights and suggestions to help your project run smoothly.

Compare prices.

When you meet with contractors, they will typically provide you with a quote for the project. Compare the information you receive and use this to help influence your decision.

Look for quotes that included **compacted sub-base, mesh on chairs, saw-cuts, and the correct concrete.** Decide with the contractor who will be responsible for **curing.**

If you have a **big area**, ensure the project is done in **as few pours as possible** as colour differences are likely - smaller operators may struggle to do this.

So, you should be wary about choosing a contractor based on price alone, especially if that quote is significantly less than others.

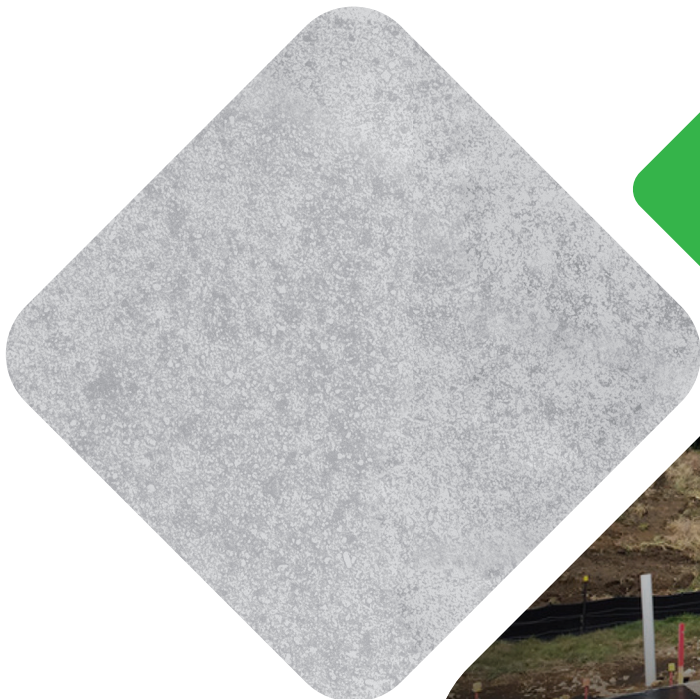
These budget contractors may cut corners or provide low-quality work, and you don't want your project to suffer just to save some initial money.

Plan Your **Pour**

- ▶ Check the weather. Hot windy days cause the concrete to dry quickly and so have higher cracking risk.
- ▶ In Spring and Autumn, be aware of areas with shading as drying rates between sunny and shaded areas (eg under eaves, fences or trees) can cause set time differences resulting in colour differences are likely.
- ▶ Carefully check concrete volume - most important is the depth (if the concrete is 10mm deeper you will use 10% more).
- ▶ Try to use a 20mm structural mix: 10mm pump mixes shrink up to 20% more and so have a much higher chance of cracking.
- ▶ Polypropylene fibres such as Sika Fibre can be used to help reduce the chance of early age cracking.
- ▶ Confirm the type of concrete, slump and volume that is required.
- ▶ Work out the speed of supply - how close together the concrete trucks are required?
- ▶ Order your concrete and pump at least 2 weeks before. Advise pump company they will not be able to blow back into the concrete truck on-site.
- ▶ Don't pour a project in a lot of small pours, they will be different colours.

Getting Ready for the Pour

- ▶ Ensure concrete is an even thickness throughout as thinner sections are more likely to crack.
- ▶ Saturate ground prior to pouring if not using DPM.
- ▶ Plan your sawcuts and mark on the formwork where they should be.
- ▶ Don't cut every second bar of reinforcement: this weakens the mesh which is supposed to hold the crack together.
- ▶ Tie mesh sheets together.
- ▶ Get materials ready to keep the slab wet after finishing is complete (see the following pages for curing options).
- ▶ If the job is a cash sale, organise payment.
- ▶ Ensure there is safe and clear access to the site for concrete trucks.





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Pour day

- ▶ Pouring the concrete on a hot and windy day can be risky, as the cracking risk is much higher due to a higher evaporation rate. Go early in the morning while it is cool and have enough people to get the concrete in quickly, then flood as soon as is practicable after finishing. Also, use Sika Anti-Vap to reduce evaporation. See our 'Laying in Hot Weather' page for more discussion and options.
- ▶ Try not to add water to the concrete truck on site unless absolutely necessary. Wet concrete is easy to place but it shrinks more and so cracks more.
- ▶ Use an anti-vap like Sika Anti-Vap on hot and or windy days.
- ▶ If a cold night expected get your sawcuts in same day, or use crack inducers or tooled joints to minimise chance of thermal shock cracking.
- ▶ The pumps will not be allowed to blow back any excess concrete into the bowl of the truck.
- ▶ If there are any breakdowns, Bridgeman trucks are only allowed to be towed out by a specialised contractor that we will organise.

Curing

Concrete should be protected from early loss of moisture (this loss can cause shrinkage cracking, as little strength development has occurred to withstand the stresses resulting from the volume change from evaporation).

Cure your concrete immediately after the finishing process for a **minimum of three days**, preferably seven.

Methods of Curing

- ▶ **Ponding:** build a sand bund around the perimeter and fill with water to cover slab
- ▶ **Spraying:** the use of sprinklers to keep slab continuously wet.
- ▶ **Covering:** impermeable covering such as plastic sheet will trap moisture on concrete surface and minimise evaporation.
- ▶ **Curing compounds:** apply after finishing when bleed water disappears (use with caution, these products may affect follow on trades like paint, tiles, vinyl, adhesives).
- ▶ **Ensure curing is even and consistent** - do not allow some areas to dry and some to stay wet during curing - different colors will likely result.
- ▶ **Do not store anything on wet or covered concrete**, as this will change the way the concrete cures beneath, likely colour variation.