Decorative Concrete Guidelines

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Prepared by the Central Region of the New Zealand Ready Mixed Concrete Association in conjunction with the Cement & Concrete Association of New Zealand, September 2001.
Decorative concrete
Since their introduction decorative concrete systems have become increasingly popular in the New Zealand market place and have brought an exciting new range of lifestyle options to what was previously considered as a purely functional material.

INTRODUCING COLOUR

There are several ways of introducing colour into the concrete:

**Integral**
Where the colour is added to the concrete at the ready mixed plant.

**Dry shake method**
Where the colour is applied to the surface of the freshly placed concrete and is then trowelled into the surface.

**Staining**
Where the colour is applied to the hardened concrete.

It is important to realise that each system has its advantages and disadvantages. You must also be aware of the limitations of the method that you have chosen. Most systems are cross-referenced to the relevant NZ standards. NZS 3109 details requirements for placing and NZS 3114 has specification requirements for the various types of finishes. Recommended practices as specified by the suppliers of the different systems must be adhered to. Concrete is a one chance material, so do it right, do it once.

CUSTOMER EXPECTATIONS

Because no two decorative colour finishes will be exactly the same, customer expectation in relation to finish and colour can often be a point of contention. It must therefore be recognised that concrete finish can always be influenced by a number of external factors and that small blemishes which are acceptable in standard concrete practice will be unacceptable in a coloured situation. This is often the result of customer expectations not being accurately communicated to all the parties involved.

Care must always be exercised in relation to the use of colour charts, photography and samples of concrete. These are to be used as an indication only, not a comparison.

Communication prior to the commencement of the job is also critical to ensure that the client is fully aware of the potential variables that may influence the finished product. Particularly since the materials used will always have a natural variation. These material variations, together with weather, site conditions, as well as the technique and workmanship of the placer, will all combine to impact on the end result.
Key Responsibilities

ARCHITECT / DESIGNER
Consultation in the design stage with all parties in relation to technical specification to ensure that the customer’s requirements can be achieved to the required standards. You must understand the methodology of the intended system so it can be fully specified. This will help eliminate any potential problems that may occur due to failure to comply with standard system practices. Be aware of the internal and external influences that can and will affect the finished result.

OWNER / BUILDER
You should have a clear understanding of the system that has been specified. Consultation with all parties involved prior to the commencement of any work is therefore critical. Before choosing a tradesperson to carry out the specified work, always ensure that the contractor can deliver the high standard required in the finishing of decorative concrete. Check out their suitability by asking to see examples of their previous jobs. This is critical in relation to the successful outcome of any project. As each system has different parameters, it is critical that the timing and flow of the job is carried out as per the system specification. This is especially important in relation to the timing of curing and cutting of joints. Correct positioning of construction joints is just as vital as the timing sequence of these joints.

MASTER PLACER
The master placer should lay the concrete as per standard trade practice and comply with the relevant NZ Standards. Comply with the client’s instructions in relation to the finish and details required. If the client’s instructions are not within normal trade practice, the placer must make the client aware of the consequences of such demands. This should always be confirmed in writing.
If unsure, always check with the supplier for any special requirements. Always inform the owner/builder of the correct trade practices with regard to the curing, cutting, sealing etc.
Always explain quoted terms and conditions, exactly what the pricing covers and who is responsible for what.
At all times adhere to the code of practice as per the Master Placers Association.

READY MIXED SUPPLIER
Always use a member of the New Zealand Ready Mixed Concrete Association who will supply concrete from a graded plant that complies with NZS 3104.
The ready mixed supplier shall supply concretes specifically designed for decorative work.
Colour must be dosed as per the manufacturer’s specification.
All information in relation to dose and colour must be recorded on docket.
It is important that the volume of concrete is double checked well before pour date.
The consequences of not having enough colour can create serious problems. It is therefore important that load sizes and timing is clarified prior to commencement of any pour with both the ready mixed supplier and the placer.
MAKING THE RIGHT CHOICE

Things to consider.
Ask to view samples of the colouring system that you are intending to use.
Make sure that you fully understand what you are going to get and that you understand the procedure.
Know the terms and condition of the quote and do they cover everything.
Is the concrete coming from a NZRMCA graded plant?
Is the placer a member of the master placers association?
What are the risks and how can these be minimised?
If you are unsure about anything in relation to the system you have chosen ask for clarification.
Remember the key to successful concreting is consistency in materials and the skill of the placer. Careful planning and attention to detail must always be balanced against the realities of the medium.

Additional information is freely available from any New Zealand Ready Mixed Concrete Association member.

Although colour reproductions shown in this brochure are printed as closely as possible to the original, some variations in shade and colour can occur.