



## Christopher Bradley

65 Crystal Waters Ecovillage  
MS 16 Maleny Q. 4552

w : [www.honedandpolishedconcrete.com.au](http://www.honedandpolishedconcrete.com.au)  
e : [christopher@honedandpolishedconcrete.com.au](mailto:christopher@honedandpolishedconcrete.com.au)  
t : 07 5494 4873  
m : 0424 122 836

# Architects and Designers Briefing Paper

*HiPerFloor Polished Concrete Finishing by Honed+Polished Concrete*

## CONTENTS

—	<b>HiPerFloor</b> page 2 Concrete Cracking Application to Tropical and Subtropical climates. Cost.
—	<b>Technical Detail</b> page 3 Level of finish. Requirements. Cost
—	<b>Why HiPERFLOOR™</b> page 4
—	<b>About Honed and Polished Concrete</b> page 5
—	<b>Resources</b> page 5

## **HIPERFLOOR™**

HiPerFloor is a unique new trade-marked process developed in Australia that produces a finish similar to polished stone. It incorporates proprietary hardening and sealing agents, application tools and a multi-stage process. It reveals the inherent character of structural concrete slabs and topping coats. Finishes can reveal the aggregate or bring a mirror like shine to steel-trowelled slabs. The total cost of the finish is more economical than polished stone tiles, vitrified tiles, parquetry, or concrete paving tiles. It is most suited to projects that call for a natural or elemental floor finish, where the integrity of the materials is highlighted.

The most economical result is the minimalist look of grey concrete and basalt aggregate, rising in price as oxides are added and specific aggregates are required. Supplementary brochures are available through us from CCS regarding oxide coloring and from Readymix, Boral and Hanson for standardized aggregate mixes, though we are not limited to these suppliers. At the more unique end, almost anything can be added to the concrete mix, including semi-precious stones and colored glass beads. More information is available from the Cement Concrete and Aggregates Association on these possibilities.

### **Concrete Cracking**

A common concern among clients with this kind of finish is the possibility of concrete surface cracking. This can be largely avoided by your engineer specifying adequate crack control joints and specifying the correct slump to the concrete supplier. More detailed advice is available through the C&CAA. Concrete is a natural material and is affected by changes in temperature and humidity during the curing process. This can be counteracted to some extent by the skill of the concrete contractor. Never the less, it is recommended that clients be counseled to expect some hair-line cracking as part of the natural patina of concrete. This problem can be further alleviated in our polishing process. The cracks are filled with a paste exactly matching the cement color and polished to match the surrounding floor finish. The end result is similar to a vein in a piece of polished stone.

### **Application to Tropical and Subtropical climates:**

Concrete floors are a perfect choice for these climates because they provide thermal mass to interior space moderating the air temperature, especially when other passive solar principles are integrated into the design such as the relation of window and eave over-hangs. A polished concrete slab is a perfect backdrop to designer rugs or classic oriental rugs. It is also easy to keep clean, requiring only a light mopping with domestic detergent and water.

## **TECHNICAL DETAIL**

### **Level of finish:**

The level of finish is high-gloss which passes the Australian Standard for dry surface slip resistance. The finish can be moderated to progressively coarser levels. However for higher slip-resistance an acrylic surface coating called Extend, blended with sand-grain sized glass particles can be substituted. Compliance with Australian Standards for Slip Resistance is very situation specific. A more precise discussion can be had in the context of a specific project.

### **Requirements**

Preferably 32mpa or higher, with an 80 slump. Level of flatness of the floor largely follows that specified and achieved by the concrete contractor. Common variation allowances are +or- 5mm, +or- 3mm per 3metres. An on-site building waste bin and water supply source are all that is required. The HiPERFLOORTM process is a dust controlled dry grinding process so interference with other trades is kept to a minimum.

### **Cost**

On larger commercial projects, price is reduced if 3 phase power is supplied. As is usual the larger the area the lower the per metre rate. Consideration is also given to the continuity of supply of contracts. The most cost-effective method to create a polished concrete floor is if scheduled immediately after the slab is poured and before framing commences. Allow an additional 25% cost-loading if the floor is to be polished after walls have been placed. To protect the finished floor during the building program we can supply and/ or install single use corflute coverings for an additional fee. Scratches can be buffed out after completion at a modest per task rate. However, the care of the floor surface remains the responsibility of the building contractor throughout the construction phase and scratch removal is at the builder's expense.

## **Why is HiPERFLOOR™ a superior finish to floors honed and finished with epoxy resins and urethane finishes?**

Plastic coatings by their nature are affected by UV damage; they yellow, become brittle and chip or crack. Patching and repairing can be problematic in trying to create a seamless finish. HiPERFLOOR™, by contrast, is an integral finish and as such needs only light mopping. It is extremely hard wearing; is scratch resistant; it repels chemicals, fats, oils and food coloring. If the surface does become scuffed or scratched it can easily be repaired by us, using a series of polishing pads. In commercial situations, a great deal of the on-going maintenance cost is therefore eliminated because a sacrificial floor polish is not required. HiPERFLOOR™ uses a penetrating sealer to repel liquids. Under normal conditions it has a durability of 6-10 years though the manufacturer recommends recoating every 3 years

### **For those conscious of creating healthy built environments**

One of the highest sources of off-gassing and on-going release of harmful VOC's (volatile organic compounds) is plastic finishes such as urethanes and epoxies. While experts differ about the duration and scale of such health issues, a component as large as the entire floor surface coated in this manner would add considerably to the toxic loading of an environment. The HiPERFLOOR™ system by contrast uses only a very thin layer of sealer to primarily repel chemicals and staining agents, rather than provide a glossed surface to act as the wearing agent as is the case with plastic floor coatings.

## About Honed + Polished Concrete

Honed+Polished Concrete is a collective of committed artisans specializing in providing the HiPERFLOORTM process for polished concrete applications. Through our affiliate contractors, we can also provide other concrete finishes such as shot blasting, which produces a sand-paper like finish usually specified for outdoor walkways; planing to reduce bumps and trip hazards; rectification of rain damaged concrete slabs; and tile and adhesive removal on existing slabs. We are located on the Queensland Sunshine Coast.

We work creatively with Architects and Designers to develop specific finishes suited to each project. We are available to meet at your office to show you physical samples, discuss options and sources, and provide a price applicable to your project. By working in co-operation with your concrete contractor we will provide up to 2 finished samples to your specifications at no cost. More samples can be done at a nominal fee.

**For further information please call:**

**Christopher Bradley at Honed+Polished Concrete**

T 07 5494-4873

M 0424 122 836

E [christopher@honedandpolishedconcrete.com.au](mailto:christopher@honedandpolishedconcrete.com.au)

W [www.honedandpolishedconcrete.com.au](http://www.honedandpolishedconcrete.com.au)

## RESOURCES:

C&CAA Cement and Concrete Association of Australia

T 07 3831 3288 W [www.concrete.net.au](http://www.concrete.net.au)

CCS Colored Concrete Systems

T 07 3287 6444 E [concretecoloursystems@riversands.com.au](mailto:concretecoloursystems@riversands.com.au)

Hanson Construction Materials

T 07 5491 7527 W [www.hanson.biz](http://www.hanson.biz)

Bill Brittain

T 0409055680 E [bill.brittain@hanson.biz](mailto:bill.brittain@hanson.biz)

Ritemix Concrete

T 07 54944788

Alan Staatz

T 0419 721 790 E [alanstataz@bigpond.com](mailto:alanstataz@bigpond.com)

Readymix Concrete

T 07 5441 6688 W [www.readymix.com.au](http://www.readymix.com.au)