



# NZ GRINDERS

MAKING A DIAMOND FROM THE ROUGH

## APPROVED GRINDING AND POLISHING SYSTEMS FOR FOOD SERVICE/ FOOD PREPARATION ENVIRONMENTS

REFERENCE PROJECTS AND PHOTOGRAPHS DISPLAYING HIGH QUALITY GRINDING AND POLISHING FREE FROM GRINDING MARKS FOR FULLY EXPOSED AGGREGATE WITH MID GLOSS IN A FOOD SERVICE OR FOOD SALES ENVIRONMENT

Please see Appendix 1

DETAILED METHODOLOGY STATEMENT INDICATING FIRST GRIND TO EXPOSE AGGREGATE, REMOVAL OF GRINDING MARKS, PROCESS OF RE-GROUT, DENSIFICATION, POLISHING AND RECOMMENDATIONS FOR MAINTENANCE AND CLEANING

We are accredited installers of the Husqvarna Hiperfloor system. Please see Appendix 2 for details and floor maintenance brochure

THE METHODOLOGY STATEMENT SHOULD BE ACCOMPANIED WITH PROGRAMME DETAILS DESCRIBING DAILY PRODUCTION RATES FOR EACH STAGE OF GRINDING AND POLISHING

We are happy to discuss this when plans and areas are confirmed

THE METHODOLOGY STATEMENTS SHOULD BE ACCOMPANIED WITH A LIST OF EQUIPMENT ANTICIPATED TO BE UTILIZED AND DETAILS OF MANAGEMENT OF GRINDING WASTE REMOVAL

We use Husqvarna and HTC Grinders and vacuum systems. We have the latest Husqvarna PG830RC.

All dust is bagged on site in our filtration bagging systems and placed in a skip.

### A STATEMENT OF ANTICIPATED QUANTITY OF GRINDING WASTE FOR RUBBISH REMOVAL

We estimate anywhere from 3 to 6 tonne of waste depending on how the floor has been placed

### ALLOWANCE FOR GRINDING DEPTH MUST BE DISCLOSED AND THE METHOD TO ESTABLISH THE ACTUAL

#### DEPTH OF GRINDING REQUIRED FOR SITE CONDITIONS

This depth will be anywhere from 3-5mm depending on how the floor has been placed. The floor needs to be cut down with grinders to obtain even exposure. We need to obtain even exposure within reason

### DESCRIBE THE ANTICIPATED TYPES OF GRINDING DISCS FOR EACH STAGE OF GRINDING AND POLISHING TO

#### ASSIST THE ASSESSMENT OF TENDER SUBMISSIONS

Please see attached the Hiperfloor system Appendix 2 – this explains the process of using metal bond and resin bond segments to cut and polish the floor

### TOPICAL APPLICATIONS OF SEALERS

NZ Grinders does not use topical sealers for diamond polished floors. The Husqvarna system recommends Hiperfloor “Green Seal” or equivalent – this is a water based non-topical product that provides a stain guard



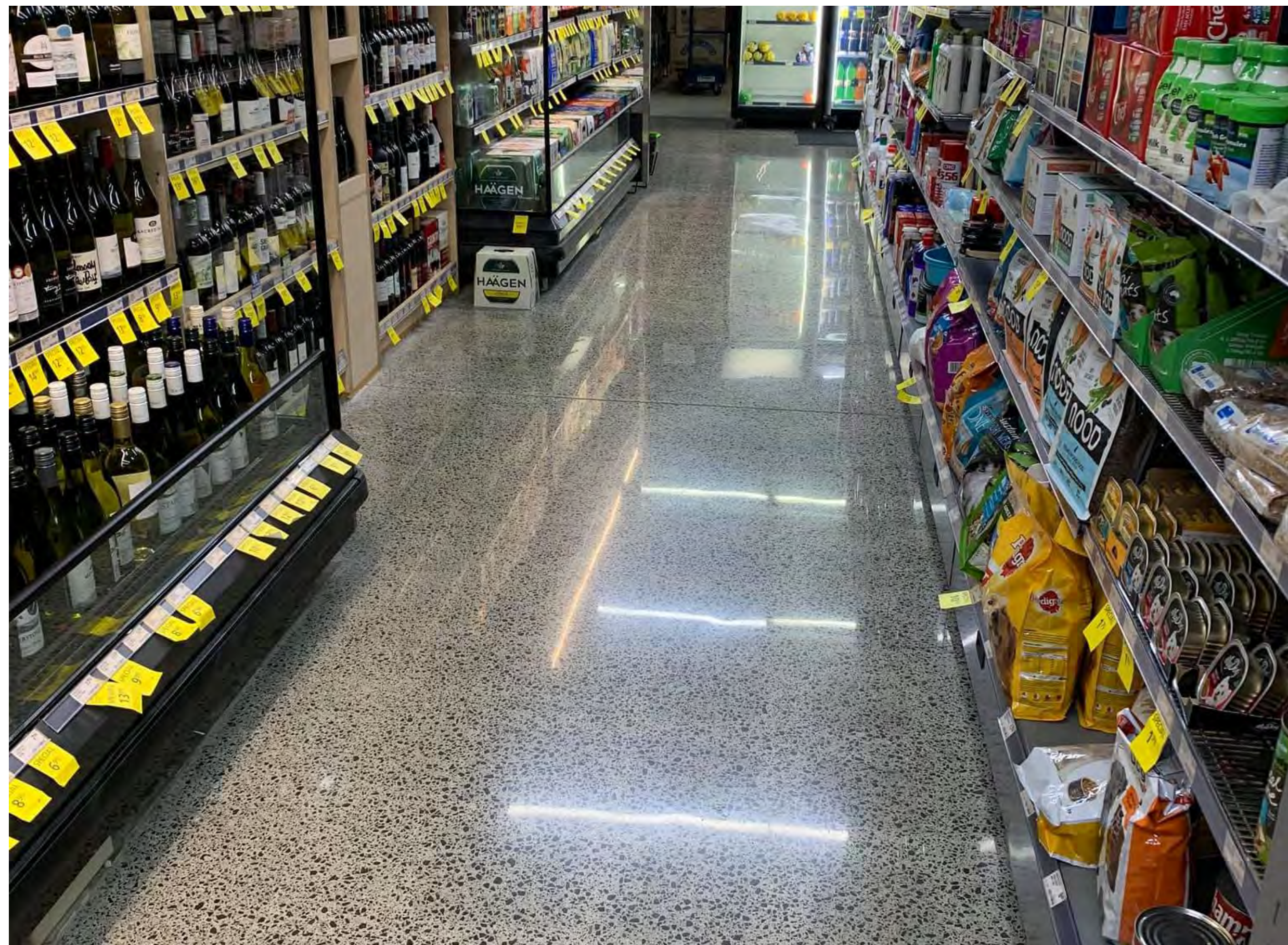


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APPENDIX 1  
REFERENCE  
PROJECTS  
& PHOTOGRAPHS

FULL EXPOSURE  
FINISH



FULL EXPOSURE  
FINISH





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FINISH



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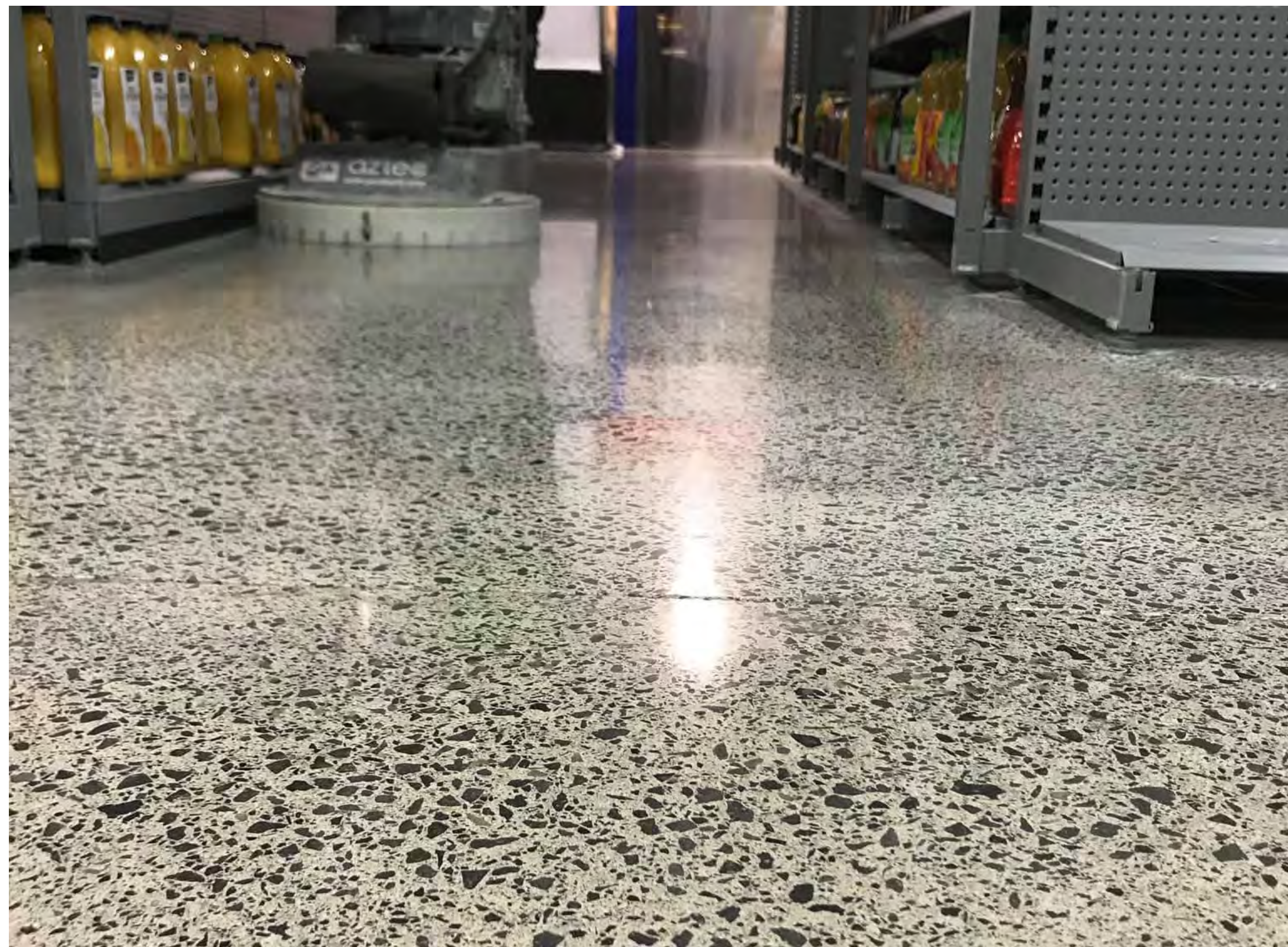
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FULL EXPOSURE  
FINISH



FULL EXPOSURE  
FINISH







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APPENDIX 2  
DETAILED  
METHODOLOGY  
STATEMENT



## DURABLE CONCRETE FLOOR POLISHING

HiPERFLOOR™ is a complete concrete surface finishing system and Husqvarna product brand. The HiPERFLOOR™ system enhances the beauty, strength and abrasion resistance of the floor while reducing maintenance and costs. HiPERFLOOR™ can radically transform a broad range of new and old constructions. With HiPERFLOOR™, Husqvarna offers first-class results from a premium brand with premium service.

### PREMIUM FINISH

A decorative, high-gloss finish for exposed aggregate floors. HiPERFLOOR™ Premium Finish is an indoor application for showrooms, high-end real estate and areas where aesthetic properties that include include flatness and reflectivity of the floor are a top priority. In addition to a reflective and decorative floor, functionality, ease of cleaning and low maintenance cost are some of the many added benefits of the HiPERFLOOR™ Premium Finish system.

FULL EXPOSURE  
FINISH

#### BENEFITS:

- ✓ Reflective and decorative finish
- ✓ Floor flatness
- ✓ Extremely high quality and durability
- ✓ Hygienic and easy to clean
- ✓ Exceptionally resistant to abrasion



**HiPERFLOOR**®



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## PREMIUM FINISH

### Process:

1. Coarse grind the concrete with either 20 or 30 grit diamonds to expose the aggregate (a full set of diamonds should be used to obtain a flat floor). The appropriate metal bond selection is critical to assure economic diamond tooling costs and labour productivity. Wet grinding may also be appropriate.
2. Remove first-step scratches with 50 grit diamonds (again a full set should be used). If the concrete seems to have significantly more holes than usual you can grout at this stage with 50 grit diamonds. (the grouting process is explained in step 3) and this will ensure that all holes will be filled once you have completed step 3 with the 100 grit diamonds.
3. Remove second-step scratches with a half set of 100 grit diamonds and combine the grinding process with GM3000 filling compound as follows:  
Combine the grinding process with GM3000 filling compound as follows:

- I. Wet the concrete to remove the suction/absorption from the concrete floor.
- II. Apply GM3000 to the floor using a broom. Approximate usage should be 5 litres per 25 m<sup>2</sup> (1500 sq/ft per 5 gallon). Begin with 5-10 linear metres (16-32 ft) only in front of the grinder to prevent the GM3000 from drying out.
- III. While still wet, run the machine with 100 grit diamonds through the wet GM3000. When using the Husqvarna FG 680 or FG 820, set the heads in opposite directions and with the Disc Speed set at 5 and Head Speed at 5-7. The GM3000 will combine with the dust created by the 100 grit diamonds and it will be forced into holes created by air-bubbles and extracted aggregate.
- IV. Grind at operator speed to remove all the remaining GM3000 residue. The floor should appear slightly 'blue' after completing an area. When using GM3000, work in areas of 5-10 m<sup>2</sup> (50-100 sq/ft) until a feel for the process has been established, then allow to dry before continuing with step 4.

4. Apply Hiperhard liberally with a very soft broom or sprayer. If spraying, make sure to follow with a broom to work the product into the pores of the concrete. Apply Hiperhard liberally so that the concrete is saturated but without forming puddles. Approximate usage should be 5 litres per 25 m<sup>2</sup> (1500 sq/ft per 5 gallon).
  - Once the Hiperhard has dried, a second coat may be required if the concrete is very soft and still absorbent. Again, spread out any puddling with a soft broom. When applying one coat to hard concrete or two coats to porous concrete, the floor should always appear damp/wet for 15-20 minutes after the application of Hiperhard. If this is not the case, another coat is required.
  - Allow Hiperhard to dry completely before moving on to the next step. A period of 6 - 12 hours is recommended as a minimum to ensure a maximum cure of the Hiperhard product. The curing time will vary significantly with extreme temperatures - in cold environments it will take longer and in warmer environments it will be shorter.

Note: We recommend the application of Hiperhard after the final metal bond step as the concrete is most porous after the metal bond diamonds. Hiperhard will penetrate into the concrete best following the metal bond step. This will ensure the hardest possible surface is achieved.

Note: We do not recommend removal of wet excess hardener with a squeegee or scrubber once it begins to gel off. For maximum saturation and hardening of the concrete surface, it is recommended that the hardener be left in contact with the concrete until completely dry.

5. Remove excess cured/dry Hiperhard using P1242 50 grit resin bond tools.
  - Apply a thin layer of Hiperhard with a microfibre applicator about 2-5 metres (5-20 ft) in front of the machine, ensuring that the dried Hiperhard has turned to a gel-like state. This will not only make the P1242 50 grit resin more aggressive, but by reactivating any of the excess Hiperhard it will minimise the possibility of cured Hiperhard covering over the 120 grit metal bond scratches that are to be removed. To enhance the final gloss level, the same process can also be done before the P1243 100 grit resin bond tools in step 4.
  - If this thin layer is too wet when grinding, there may be excessive wear of the resin bond polishing pads.

Ensure that any excess Hiperhard is removed completely. In its unreacted state, dry excess Hiperhard can cause the following problems if left on the floor:

- It will create brown/dark and unsightly patches in the floor when polished using dry resin polishing pads.
- If it comes into contact with water it will reactivate and become very slippery.
- It will cause dull patches or 'clouds' in the finished product as Hiperhard will not polish up to the same degree as the harder concrete.

If the use of the P1242 50 grit resin bond tools is unsuccessful at removing excess Hiperhard (this would be the case if puddling Hiperhard was left to dry/cure on the surface), use P1183 100 grit resin bond polishing pads in a semi-wet grinding fashion with water. Then move on to step 6 with P1243 100 grit resin bond floor-polishing pads.

Note: When polishing concrete, we do not recommend grinding higher than 100 grit metal bond tool.

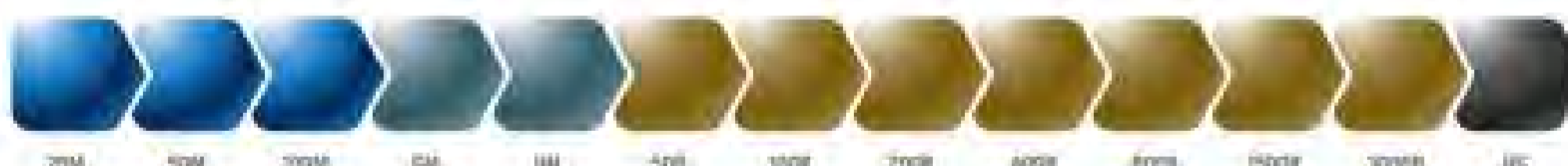


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## PREMIUM FINISH

### Step-by-step:



**Premium finish:**  
M = Metal bond  
GM = GM 3000  
HH = Hiperhard  
R = Resin bond  
HG = Hiperguard Penetrating Sealer

- The crossover from metal bond to resin bond is the most important stage of the polishing process as far as scratch removal is concerned. The longer the metal bond diamonds are used, the more chance scratches will be made in the floor by the metal bond step (as opposed to the diamond abrasive in the metal bond step)
- Resin bond diamond pads (generally) have significantly higher production rates than metal bond tools. The sooner you begin with resin bond diamonds, the more efficient the production rate.

**Note:** We do not recommend the use of metal bond diamond tools once the Hiperhard has been applied.

- Use of metal bond tools can remove too much of the densified surface, leaving an inconsistent end-result.
- Metal bond tools are more aggressive than resin bond tools and can create new holes/pits in the surface.

If the floor does not appear consistent in gloss/shade after step 5 is completed, a thin or 'enhance' layer of Hiperhard can be applied to the floor using a microfibre applicator. This layer should be just enough to wet the surface evenly without puddling. Allow the enhance layer to dry before continuing.

6. Continue the polishing process with P1243 100 grit resin bond floor polishing pads.
  - A thin enhance coat of Hiperhard Lithium with a microfibre applicator about 2-5 metres (5-20 ft) in front of the machine can be applied to boost the final gloss levels.
7. Continue the polishing process with P1244 200 or FP40 200 grit resin bond floor polishing pads.
  - A thin enhance coat of Hiperhard Lithium with a microfibre applicator about 2-5 metres (5-20 ft) in front of the machine can be applied to boost the final gloss levels.
8. Continue the polishing process with P1245 400 or FP40 400 grit resin bond floor-polishing pads.
  - You should notice a sharp reflection developing at this stage.
9. Continue the polishing process with P1246 800 or FP40 800 grit resin bond floor-polishing pads.
10. Continue the polishing process with P1247 1500 or FP40 1500 grit resin bond floor-polishing pads.
11. Continue the polishing process with P1248 3000 or FP40 3000 grit resin bond floor-polishing pads.

**Note:** We do not recommend the use of P1248 3000 or FP40 3000 grit resin bond diamond tools in high traffic areas or near doorways that lead next to an outdoor area. When the floor is wet or dirty these areas can become slippery. Use of the 3000 grit tools would be for a showroom floor finish only.

12. Apply 2 - 3 coats of Hiperguard Enhance Plus penetrating sealer using a microfibre floor sweeper, wet-on-wet application. The floor should be fully saturated without any excess to ensure all pores are filled. The use of Hiperguard is highly recommended to prevent contaminants from staining the floor. However, in some circumstances, and more so with the repair of previously highly contaminated surfaces, Hiperguard will show up previous staining beneath the surface as the concrete pores already having a contaminant in them.
13. Leave to cure fully for at least one hour or until touch dry and then buff off residual Hiperguard sealer with nylon buffing pads.

**Note:** The surface can be ground and polished to tailor to different levels of exposed aggregates and non exposed aggregates and to high or low gloss levels by adding or omitting steps.





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## Caring for your new polished concrete floor



NZ GRINDERS  
59 AERODROME RD  
MT MAUNGANUI,  
TAURANGA

### HOW TO CARE FOR YOUR NEW FLOORS:

- Dust mop the floor daily with a microfiber pad
- If wet mopping the floor, always use clean water and clean mops
- Clean Spills Immediately
- Never use cleaners with chemicals - only use a neutral ph cleaner

Questions?  
Call Us

0508 GRINDER  
0508 694 746

FULL EXPOS  
FINISH

[www.nzgrinders.co.nz](http://www.nzgrinders.co.nz)

Get in touch:



[sales@nzgrinders.co.nz](mailto:sales@nzgrinders.co.nz)