

Concrete Repair Information Pack

White + Reid Ltd. carry out high quality concrete repairs to existing and new concrete that focus on the aesthetic or final surface appearance of the material as opposed to structural defects. Our ultimate aim is to repair concrete so that any remedial work does not affect the overall appreciation of the fair-faced concrete aesthetic.

Overview of repair procedure

When embarking upon any new project we make an initial site visit to gain an understanding of the general state of the existing concrete and the overall vision and expectation that the client has in respect to the final finish. Once it has been established that White + Reid Ltd. are able to enhance the overall aspect of the concrete, a sample swatch of concrete repair tones is created that aim to match the nature of the concrete on site. A set of 24 swatches will normally be produced and these will serve as a constant point of reference for the repair work. The swatches will be retained for future reference should any maintenance programme be incorporated after the hand-over of the project. Once the swatches are created, a sample session is arranged to repair a selection of common repair issues. Once the client has accepted this on-site sample a complete site survey of all repairs is carried out with all parties concerned. Upon receipt of the survey, White + Reid Ltd will be able to begin the repair programme.

Initial site visit

Before the initial site visit is arranged, it is helpful to have background information on the project. An example of such information would be plans of the building, the original specification document, the mix design used, a general overview of the issues concerning repair and any photographic imagery that may be available. The initial site visit will aim to give us the general scope of the work involved and to outline ways that White + Reid Ltd. may be able to resolve the concerns expressed. The site visit will also inform choices of material combinations used to create the sample swatches. During this site visit it is important for expectations to be addressed as to how the finished remedials may compare to the original specification document. Following the site visit we will establish the appropriateness of our input in the project. If we feel that we are able to assist in remedial work, then we will produce an initial document outlining our considered course of action in agreement with the client.

Sample swatches

White + Reid Ltd. will produce a selection of 60mm circular tonal swatches that we feel best represents the concrete on site. We may request that a small on-site

sample be taken from the site concrete or subsequently sent to us in the post. A combination of up to 24 tones will be produced for fair faced in-situ cast concrete. Additional swatches will be required if the remedial work deals with exposed aggregate finishes or steel trowelled flatwork. The sample swatches will be individual to each project and will be retained by White + Reid Ltd. for future maintenance of the concrete should this be necessary.

Sample session

This session will be carried out on site to an agreed selection of repairs. It is important that the sample session covers all categories of repairs that have been identified. Possible repair categories may include:

- Patch repairs to blowholes, arrises, honeycombing
- Repairs to areas of grout loss and surrounding darkened patches
- Treatment of stains to the concrete surface
- Repairs to areas of spalling or dusting
- General cleaning
- Polishing of inadequate or dusting flatwork
- Cleaning up of excessive spillage and reinstatement of joint lines
- Tie hole filling

It is a fundamental role of the sample session to establish the success of each repair carried out in order for levels of expectation to be agreed. The sample session will also form a benchmark for the time required to complete each individual repair to the agreed finished quality. Photographic evidence will be collected prior to, and following the sample repairs by White + Reid Ltd. A meeting will be held on site by all concerned parties to discuss the success of the sample session. An overall category of repairs will be collated which will be used to compile the site survey.

Site survey

This document will list the complete set of repairs to be carried out. Any additional repairs that are not covered by the scope of this survey will only be carried out in agreement with the client. The site survey should contain the following information:

- The location of the repair
- A photographic image of the repair
- The repair category
- The date the repair was started
- The date the repair was signed off by White + Reid Ltd.
- The proportion and type of repair material used

An example of a site survey:



no.	location	type of defect	defect category
65	x9-x10 xl	slight arris damage	1
date	repair details	sign off date	

Repair Programme

Work will begin with cleaning all exposed concrete surfaces. Where possible, this cleaning will be done dry so as to maintain the original tone of the material and not to damage surrounding surfaces. Cleaning the concrete is essential in achieving the natural finished tone of the material. If a sealant is to be applied to the surface, it should be established that an adverse tonal discrepancy will not occur or be noted between the repaired area and surrounding concrete. A sample is strongly advised prior to commencing repairs.

Once the area is cleaned, the repair will be made. Several repairs are completed concurrently as each repair will require a number of days for the material to cure and be finished. White + Reid Ltd. will constantly update the client on progress which will be documented in the site survey.

The nature of aesthetic concrete repairs makes it very difficult to precisely gauge how long repairs will take. Additionally, more often than not, as the concrete is cleaned up, more issues are uncovered and the site survey may be adjusted according to the additional workload. As site activity progresses, in-situ concrete is prone to damage, which may require additional attention. Conversely, as the project develops, it may be unnecessary or ill advised to carry out all of the repairs cited in the survey. For this reason, White + Reid Ltd. are only able to offer estimated overall timescales for the repair regime and cannot offer fixed costs for any repair programme.

Specifics of repair work

Where possible or unless otherwise specified, White + Reid Ltd. will use proprietary cementitious repair materials and are able to achieve a good colour match. All materials are batched using electronic scales for accuracy and tried and tested application methods ensure consistency in the final finish. Technical data sheets of repair materials and COSHH documentation are available upon request.

Each repair requires four stages involving cleaning of the surrounding concrete, selection and application of the repair material, abrasion of the surface using diamond nickel bonded pads and final tone matching of the new and existing surfaces.

Small scale polishing of flatwork is achieved through hand and machine diamond polishing. Please note that this procedure requires the addition of water to the surface. Small scale arris polishing can be achieved through dry polishing. When polishing existing flatwork, it is essential that trials be carried out to check that the material strength is sufficient to avoid aggregate 'pop outs'. The addition of a surface hardener may be required. Please also note that any polishing of flatwork will, depending upon the extent of surface removal, create aggregate exposure.

Our team

White + Reid employ a team of experienced concrete repair specialists. The nature of the work demands that we be sensitive to and respect the original characteristics of the material in accordance to the overall vision of the project. It is for this reason that we take a holistic approach to repair work, always maintaining close control over our intervention. It is by adopting this position and working practice that we are able to complete high quality repairs on high profile projects that has ultimately allowed the concrete to sit beautifully in the environment as it was originally designed.