SIROCCO - METHOD STATEMENT

APPLICATION OF SIROCCO ROCKPATCH ARC
CEMENT BASED CONCRETE REPAIR SYSTEM.

1. Surface Preparation

1.1 All defective areas will be delineated and marked out on site by the Supervising Officer.

1.2 Saw cut around the perimeter of the defective area to a minimum depth of 30mm. The cut will be perpendicular to the surrounding concrete face. No repair will be “feather-edged”

1.3 All defective concrete will be removed by using appropriate tools and equipment, e.g.
   - Pneumatic breaker
   - Electric hammer
   - High pressure water jetting
   - Hammer and bolster

1.4 The concrete will be removed from around the full circumference of the steel reinforcing bars and a further 20-30mm beyond it, or as directed by the Supervising Officer. Removal will continue along the lengths of all exposed reinforcing bars to a point 50mm beyond the limit of corroded or deteriorated steel, or as directed by the Supervising Officer

1.5 Where reinforcing bars need to be replaced (say 100x100x10-12mm), they will be fixed or welded as directed by the Supervising Officer. If welded, the slag will be removed prior to continuing. Securing anchors or spraggs made from reinforcing bar and bent at 90 degrees shall be used to provide additional anchoring of the reinstatement material. These anchors / spraggs shall be installed at 6 per square metre and be anchored with Sirocco Lokset Anchor pack Epoxy.

1.6 The reinforcing steel will be cleaned to a bright condition such as BS 4232 (second quality) or Swedish Standard SIS 05 5900: 1967 (quality SA2½) by grit blasting. Where chlorides are present, grit and water blasting will be sued, taking particular care to remove chlorides from pits in the surface of the steel.

1.7 Where large areas of steel reinforcing are exposed, these will be made fully secure using clean tie-wires and, if necessary, anchored to the concrete substrate spraggs in an approved manner.

1.8 All dust and loose particles will be removed from the treated area using clean, oil-free compressed air. Where chlorides are known to have been present, the concrete and the
exposed reinforcing bars will be thoroughly washed down with clean water to ensure the removal of residual contamination.

2. **Steel Priming**

2.1 Priming of exposed steel reinforcing and anchor bars will take place immediately the sand blasting operation is complete. In the case of wet blasting process, priming will take place immediately the steel is dry.

2.2 Sirocco Zinc Rich Primer will be stirred thoroughly until of uniform consistency and applied to all steel surfaces.

2.3 A single continuous coating will be applied to all exposed reinforcing bars using a suitable paint brush (25-35mm wide). Care will be taken to ensure an unbroken coating is achieved, particularly to the back of each bar. The dry film thickness will be 40 microns minimum would be ideal.

2.4 The primer will be allowed to dry (minimum 30 minutes at 20°C).

3. **Concrete Preparation**

3.1 The concrete will be pre-soaked with a fine spray of clean water. If the concrete substrate is particularly dry or absorbent, it will be sprayed again before continuing. Before priming, no free surface water will be present.

A bonding coat of Sirocco Wet to Dry 313 Adhesive will be mixed where appropriate and applied to all horizontal and vertical surfaces using a suitable paint brush (preferably 25-35mm wide with shirt bristles). This will be achieved by using a “scrubbing” action, taking special care to work the primer into all irregularities in the concrete face. The Wet to Dry 313 MUST NOT be allowed to dry out before the repair material is placed. This would cause a debonding or delaminating layer and subsequent repair failure would be envisaged.

4. **Repair Material Application**

Note Rockpatch ARC is supplied in two distinctly different materials – ( B for Base or the lower parts of the repair in plain white bags) and ( T for topping which is for the top 30 – 40mm of the repair in Sirocco printed bags ).ARC Topping shall be laid immediately on the fresh Base whilst still fresh / wet.
4.1 Sufficient bags of Sirocco RockPatch ARC B (Base) and Sirocco RockPatch ARC T (Topping) will be bought as close to the repair area as practical. Suitable mixing equipment and potable water will be made available.

4.2 Sirocco RockPatch ARC must not be mixed by hand. The following mechanical mixers should be used to obtain the maximum performance from the product.

a) “Mixal” type forced action pan mixers

4.3 Water will be gauged accurately and will be consistent for each batch of RockPatch ARC. The rates of addition will be as recommended in the manufacturer’s current data sheet.

4.4 Note the following mixing process – The entire bag of Rock Patch ARC shall be loaded into the mixer and mixed for approximately 30 seconds. The correct volume of Water will be then be poured into the mixing pan and whilst mixing takes place. When all the water has been added, mixing will continue for a further 3 minutes.

4.5 The Sirocco RockPatch ARC will be used immediately mixing is complete. It will be applied by shovel or, where access is difficult or exposed reinforcing is congested, by gloved hand. In either case, it will be fully compacted, particularly around the full diameter of exposed reinforcing bars by means of full poker vibration to exclude any possible air.

a) Sirocco Rockpatch ARC will be applied to vertical surfaces in layers up to 80mm. In many cases the actual application thickness will depend on the substrate profile and the amount of reinforcing bars available to offer additional support. High-build will best be achieved by applying “wet on wet” layers, ensuring each is fully compacted into its predecessor. Where exceptional thicknesses are required over 80mm RockPatch ARC will be supplied in Base Material marked (B) and Topping material marked (T).

NOTE:

4.6 The completed repair will be surface finished using a leveling and vibration screeding to finish of the surface and for smaller repair areas steel trowel or a wood-float, depending on the required texture of the finish.

5. Curing

5.1 SIROCCO products are based on cement and will be cured in accordance with good concrete practice.

5.2 SIROCCO Cretecure WB will be used as a curing membrane. The material will be spray-applied to the required areas immediately they have been surface finished. Care will be taken to ensure complete coverage, particularly around the interface with the host concrete.
5.3 When a protective coating is to be subsequently applied, the method of cure will be fully compatible and will be specified by the Supervising Officer.

6. General
6.1 All applications will be made in accordance with the manufacturer’s current recommendations.

Method Statement originated May 2012