**NG SAMPLE APPENDIX 55/1: REPAIR PRODUCT – ADDITIONAL AND MODIFIED REQUIREMENTS**

### Assumed repair method for each construction activity reference IS EN 1504-9. [5502.1, 5508.3]

### Performance characteristics for Class R4. [5508.4]

### Other compliance requirements for constituent materials of repair product. [5509.5]

### Prohibition on use of microsilica as a constituent material. [5509.15]

### Early strength gain requirements of flowable product. [5512.5, 5514.8]

### Range of elastic modulus required for repair product if different from IS EN 1504-3, Table 3. [5512.06]

### Required “flowability” of flowable material if not minimum of 750mm for high flow and 400mm for normal flow. [5514.6]

# NG SAMPLE APPENDIX 55/2: ADDITIONAL REQUIREMENTS FOR REINFORCEMENT

### Criteria for determining the treatment of existing reinforcement (typical average section loss greater than), which affected bars should be cut out and replaced, or new bars lapped. [5505.2]

### Schedule of reinforcing bars to be maintained on site. [5505.2]

### Additional performance characteristics of reinforcement coatings (glass transition temperature, shear adhesion). [5505.4]

### Specific requirements for site welding of reinforcement, where permitted. [5505.5]

# NG SAMPLE APPENDIX 55/3: REQUIREMENTS FOR EXECUTION OF CONCRETE REPAIRS

### Concrete breakout procedure trials on the structure or a reinforced concrete mock-up/model of the structure. [5503.20]

### Details and further requirements for Temporary Works including Technical Approval. [5507.1]

### Any requirements for formed surface finishes. [5507.2]

### Requirement for clear viewing panels within formwork. [5507.3]

### Frequency and distribution of cores to test integrity and adhesion of repair area. [5512.33, 5512.39]

### Target adhesion strength of repair mortar material at interface with concrete substrate in accordance with IS EN 15054-10, Table A.2. [5512.44]

### Flowable concrete placement trials e.g. simulated soffit repair, simulated top repair etc. [5514.9]

### Target adhesion strength of repair at interface with concrete substrate in accordance with IS EN 15054-10, Table A.2. [5514.11]

### Repair layer thickness requirements. [5515.5]

### Unformed finish on repair patches using hand-applied concrete or mortar. [5515.6]

### Target adhesion strength of repair at interface with concrete substrate in accordance with IS EN 15054-10, Table A.2. [5515.7]

# NG SAMPLE APPENDIX 55/4: ADDITIONAL REQUIREMENTS FOR SPRAYED CONCRETE

### Modification to Clause 5507 requirements for sprayed concrete. [5516.13]

### Target adhesion strength of sprayed concrete repair material internally and at interface in accordance with IS EN 1505-10, Table A.2. [5516.35]

### Description and specification for alternative sprayed concrete finish. [5516.55]

# NG SAMPLE APPENDIX 55/5: ADDITIONAL REQUIREMENTS FOR CRACK INJECTION

### Classification of injection products for each location in accordance with Annex A of IS EN 1504-5. [5519.3]

### Additional/replacement requirements of IS EN 1504:5 Tables 6, 7 and 8 for injection products. [5519.9, 5519.10]

### Acceptable minimum percentage filling of crack exposed in core if different from 80%. [5519.22]

# NG SAMPLE APPENDIX 55/6: REQUIREMENTS FOR SURVEY OF STRUCTURE

### Requirements for concrete investigation by the Contractor and subsequent factual or factual/interpretive reporting, including: [5503.2]

### Electrical potential mapping;

### Chloride sampling;

### Carbonation testing;

### Concrete resistivity;

### Reinforcement cover survey;

### Concrete sounding survey.

# NG SAMPLE APPENDIX 55/7: ADDITIONAL REQUIREMENTS FOR GALVANIC ANODES

### Requirements for Contractor design of galvanic anode installation. [5506.12]

### Required spacing of galvanic anodes around the perimeter of repair if not to be specified on the drawings. [5506.20]

### Requirements for monitoring of galvanic anode installation including: [5506.23]

###  Connections;

###  Junction boxes;

###  Control boxes;

###  Local or remote monitoring.