

approximately 60o to the surface of the sound concrete.

- I. Loose aggregate and concrete pieces shall be removed by light chipping hammers, stone chisels and bolsters.
- J. Concrete in repair areas shall not be removed to expose the main reinforcement unless it is required and instructed by the Engineer.
- K. The repair area shall be initially cleaned by oil free compressed air. The area shall be inspected by the Engineer and the Engineers instructions shall be followed.
- L. Additional concrete removal shall be carried out in any of the following circumstances:
 - a. Remove concrete to assess condition deeper inside the concrete.
 - b. When the reinforcement is badly corroded and requires full exposure to allow replacement if necessary.
 - c. If it is found that the carbonated depth has not been fully cleaned out.
 - d. Where reinforcement has corroded and adjacent continuous length of 50mm of corrosion free reinforcement needs to be exposed. The boundaries of active corrosion areas shall be assessed by the Engineer.
 - e. An additional length of un-corroded bar, up to 200mm, shall be broken out if couplers are to be used for replacement reinforcement.
 - f. If concrete surrounding the exposed area is not sound or is contaminated.
 - g. When chloride initiated corrosion is evident and not completely cut out.
 - h. When insufficient cover to the reinforcement is noted and that reinforcement is of small diameter to allow the reinforcement to be pushed back to provide enough cover.
 - i. When the reinforcement has become loose as a result of cover removal operations and the concrete needs to be cut back to areas of sound embedment.
- M. When instructions are given to cut concrete behind the embedded reinforcement a minimum gap of 20mm shall be created behind the reinforcement to allow the full circumference of the reinforcement to be sand blasted as specified. Removal shall not be more than 50mm measured from the back of the reinforcement.
- N. The extent of concrete removal shall be agreed by the Engineer before any reinforcement preparation and repair commences.