



Concrete is a material that can be found in many historic war memorials. It was commonly used for bollards with chain-link fences and for steps or other landscape features. Occasionally concrete has been used for decorative features such as mouldings and sometimes whole war memorials.

## Problems

The main problem with concrete is cracking which can occur at different stages of its lifespan. Cracking can be caused by a number of factors including:

- Faulty mix in the beginning
- Improper design not allowing for expansion and contraction
- Inadequate curing
- Freeze/ thaw action
- Corrosion of ferrous fixings inside
- Loss of structural support

The first three problems appear early in the lifespan of concrete and the latter three over time. It is impossible to have absolutely no cracking in the concrete during its lifespan.

## Repair

It is important to be aware of the limitations of concrete repairs. It is very difficult to undertake surface repair to cast concrete because the original mix of materials cannot be replicated exactly. Therefore, any surface repairs may be quite obviously a different colour or texture and look unsightly. It may be worth considering painting or rendering areas to make them look more harmonious.

Cracks are easier to treat by the application of grout based on Ordinary Portland Cement and fine mastic sand in 1:1 ratio. Other options include thixotropic polyester or epoxy resin.

In any type of repair, work should be carried out by a professional. Samples of materials should be provided and tested first before general applications.

Please note that this helpsheet is intended to offer informal advice and is a distillation of experience. The information contained in this helpsheet is not exhaustive and other sources of information are available.

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