

1. Introduction

With the advancements in precast technology, precast concrete elements can be manufactured with relatively straightforward repeated process, in different forms and finishes, to meet the rising expectation for faster construction and better quality building. In recent years, there has been increased use of precast concrete elements in local building industry. In tandem with this trend, CONQUAS has incorporated the workmanship standards required for such elements.

In general, precast concrete elements being manufactured in a more controlled environment, are of better quality than the cast in-situ elements. However, it is not uncommon to come across major defects such as extensive chip-off and cracks on these elements, which can result in substantial reworks and rectification cost. It is therefore practical to address these quality related problems upfront, so as to maximise the benefits of using precast concrete elements.

This guide highlights the salient quality issues involved in the design, production, delivery, site handling, storage and installation of precast concrete elements. The requirements and recommendations given are a general presentation of the important factors that govern the quality of the precast concrete construction.



Due to the volume constraints, this guide will focus on the quality issues pertaining to the use of common precast concrete elements in residential and institutional projects such as façades, walls, columns, beams and slab panels. It adopts the quality standards set out in CONQUAS 21 and includes the CONQUAS quality assessment criteria in the recommended inspection checklists.

References have been made to the other BCA publications on “Structural Precast Concrete Handbook”, “Buildable Solutions for High-Rise Residential Development”, “Buildable Solutions for Landed Residential Development in Singapore” and “Good Industry Practices on Waterproofing for External Wall”.