

Lulworth House



Lulworth House is a 19 storey, 56m tall tower block on the Agar Grove Estate in Camden, North West London. Completed circa 1964, the structure was designed as two conjoined, offset rectangular blocks and completed with flat roofs. The structure occupies a prominent position within the Agar estate and is the only high rise within the development.

Location
Camden, UK

Client
Camden Council

Completed
December 2011

Structure
**Lulworth House
(Residential Building)**



The Problem Identified

In 2011 spalling of the pre-cast panels occurred, concrete debris fell from the building and a protective scaffolding was rapidly installed around the structure to safeguard residents.



The Solution Developed

A survey was undertaken which found that pre-cast panels beneath the windows and edges of Lulworth House contained cast in chlorides in quantities known to initiate reinforcement corrosion. As a consequence of high levels of chlorides any future repairs were likely to fail prematurely due to corrosion activity around the patch, induced through the removal of contaminated concrete i.e. the 'incipient anode' or 'ring anode' effect. The Concrete Consultancy 2000 Ltd. provided Camden Council with a detailed report that recommended the use of PatchGuard™ galvanic anodes.

The PatchGuard anodes were installed in the repaired panels in the surrounding concrete, rather than the traditional approach of embedding sacrificial anodes within the patch repair. The protective current was delivered directly to the steel outside the patch which was at the greatest corrosion risk, as opposed to the clean steel within the patch repair.



The Benefits Provided

Corrosion related deterioration of Lulworth House has been halted. PatchGuard anodes are compact, simple and quick to install causing minimum disruption. Placed within the host concrete for enhanced current distribution PatchGuard anodes provide long term protection of concrete repairs. The system is self-powered, minimising future maintenance requirements and associated life costs. The risk of secondary corrosion around the perimeter of the concrete patch repairs has been mitigated thus significantly extending the life of the patch repairs.



Spalling found on the pre-cast panels

CPT Products Used



PatchGuard™



DuoCrete PG Mortar



ISO 9001
Cert No. 10159