

Levita House, part of the Ossulston estate



Levita House is located between Euston and Kings Cross. Built between 1927 and 1931, the highly innovative estate is a rare British example of the architectural ideas pioneered in the Karl Marx-Hof complex, Vienna, where high-standard, high-density homes were designed and built to create tight-knit communities for workers.

Levita House features reinforced concrete access balconies framed by concrete-encased steel columns and beams.

Location
London

Client
Camden Borough Council

Completed
January 2022

Structure
**Grade II Listed
Residential Block**



The Problem Identified

In July 2021, concrete testing works identified elevated chloride ion levels in a number of the north elevation columns and beams, along with carbonation that had reached the steel at localised areas of low cover.

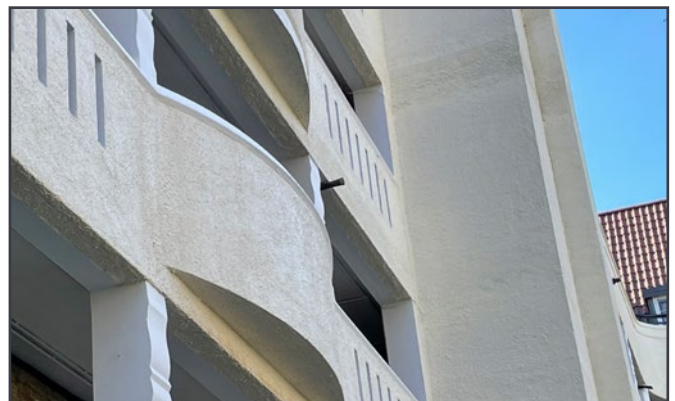
Breaking out and replacing all the contaminated concrete would be expensive and disruptive, and would not be in the spirit of one of the key principles of listed building restoration, which is to retain as much of the original building fabric as possible.



The Solution Developed

CPT was instructed to design a targeted galvanic anode solution to prevent further decline and to mitigate corrosion for up to 20 years.

The client did not want a system that required a permanent power supply or ongoing monitoring. After a trial installation confirmed that the anodes were working well, CPT proposed installing a PatchGuard Strip system in the areas of contaminated concrete.



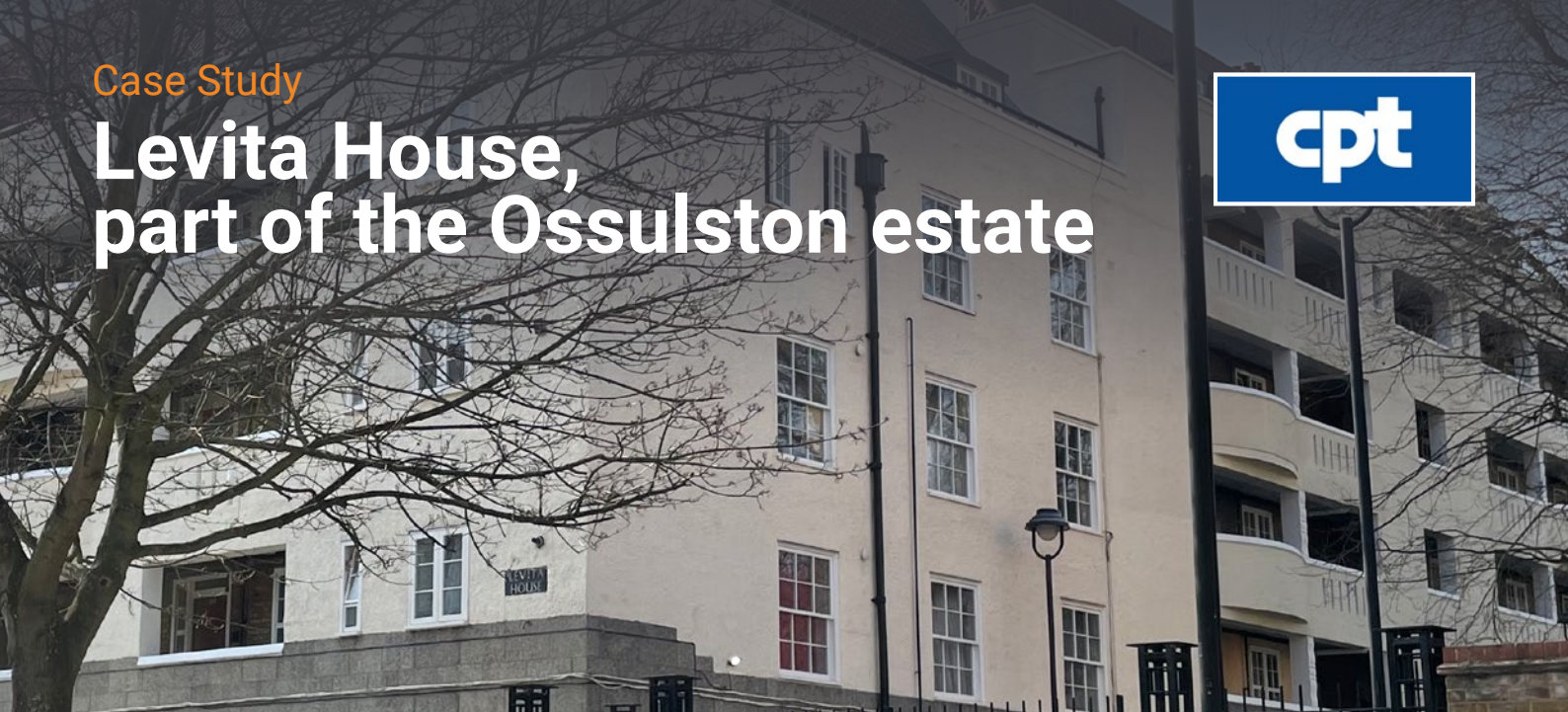
The striking design features of Levita House

Strings of anodes were installed in slots of 6mm wide and 40mm deep, and embedded in DuoCrete P Mortar. A small section of steel reinforcement was exposed and titanium wire at both ends of each string (max. 20) were attached to the steel by rivets.

The compact profile of PatchGuard Strip is ideally suited for installing into saw cuts in the concrete cover, and once in situ the units corrode sacrificially to the surrounding steel reinforcement.

Case Study

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Corrosion of beam flange



Cracking and delamination



PatchGuard Strip placement in sawcuts

CPT Products Used



The Benefits Provided

PatchGuard Strip galvanic anodes will provide ongoing corrosion control at Levita House for a design lifetime of 20 years.



ISO 9001
Cert No. 10159