

# New Street Car Park



Birmingham New Street Station was being transformed into a modern transport hub by Network Rail. The £140 million redevelopment was to include the Grand Central Shopping Mall and the flagship store John Lewis. As part of this redevelopment an existing multi story car park was to be retained in part for drop off parking for the revamped station and partly converted to retail premises.

# GRAND CENTRAL

Location  
**United Kingdom**

Client  
**Network Rail / MACE**

Completed  
**April 2013**

Structure  
**Multi-Storey Car Park**



## The Problem Identified

During its previous use, the car park had been exposed to de-icing salts which had led to chloride contamination of the concrete and steel reinforcement corrosion.



## The Solution Developed

CPT designed a DuoGuard™ hybrid anode system to stop ongoing corrosion and prevent further damage at New Street car park. DuoGuard 500 and 750 anodes were installed into the car park deck over an area of 2,500m<sup>2</sup>. Using an external power source, an impressed current was applied to stop active corrosion and render the steel passive. The DuoGuard anodes were then disconnected from the power source to self-generate a galvanic current, sufficient to maintain steel passivity and control corrosion. The anodes were connected into small enclosures which were discretely located to allow future access to the system at any time. The installation was completed on target and to an extremely tight timescale.

The DuoGuard hybrid anodes were selected due to the speed and simplicity of installation, the supporting technical data and technical support offered by CPT and minimal maintenance requirements.

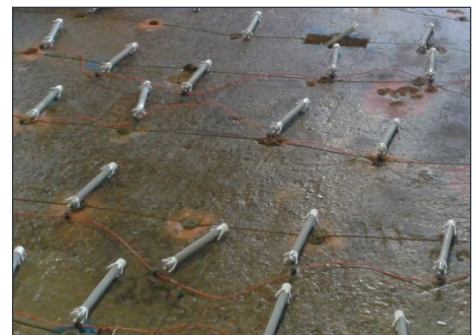


## The Benefits Provided

Corrosion related deterioration of the Birmingham New Street multi story car park has been halted. After the initial power up period using an external power source the DuoGuard system is self-powered thus minimising future maintenance requirements and associated life costs.



Birmingham New Street Car Park



DuoGuard 750 & DuoGuard 500

## CPT Products Used



DuoGuard™  
500 & 750



DuoCrete  
SD Mortar

Number of Anodes used: 10,500



ISO 9001  
Cert No. 10159