

Laverock Hall Bridge, Cramlington, UK



Country: United Kingdom
Timescale: March—July 2006
Structure: Dual Carriageway Overbridge
Client: Northumberland City Council

CPT Treatment used:
DuoGuard™ Hybrid Anode™ System



Laverock Hall Overbridge was suffering typical corrosion problems associated with leaking bridge deck joints , exhibiting significant concrete spalling as a result of chloride induced steel reinforcement corrosion.

Northumberland County Council have an obligation to maintain a number of structures distributed over a wide Geographical area.

Problem

Deterioration of the beams was visible due to the corrosion activity and technical analysis showed chloride levels in the concrete were likely to lead to further corrosion problems.

Solution Developed

CPT fabricated and installed monitoring equipment and measurement probes which were installed on the bridge- to allow remote monitoring of DuoGuard 500 performance and the corrosion condition of steel in the bridge. Results obtained from the monitoring system thus far indicate a potential lifetime of the DuoGuard 500 units of 50+ years.

Benefits

This system was ideal as Northumberland County Council were keen to have a low maintenance, long term solution To their steel reinforcement corrosion problems. DuoGuard also has the facility to allow treatment to be targeted to specific areas making a more cost effective repair.



Ref. Electrode



DuoGuard 500

CPT Products Used:

- ◆ DuoGuard™ 500
- ◆ DuoCrete SD Mortar
- ◆ MN15 ref. electrode
- ◆ GAN 1 monitoring system

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