



## ARDLEIGH GREEN BRIDGE

# OLE removal from bridge structures

## The Project

Ardleigh Green Bridge (AGB) carries four lanes of the A127 Southend Arterial road across four lines of an overhead electrified, commuter railway line. REL was contracted to move and relocate the OLE wiring to allow for the demolition of old structures.

## Scope of works

The railway which runs below Ardleigh Green Bridge (108/A) is the London to Norwich Line (ELR -LTN1) between the stations of Harold Wood and Gidea Park.

At this location, LTN1 consists of four lines: the UP & DOWN 'Mains' and the UP & DOWN 'Electrics'. All four are powered by 25kV overhead electrified lines.

The railway OLE above all four lines featured newly installed GEFW wiring system renewed by NWR which was attached to the original bridge structure abutment on the North.

At the inception of this job, REL was contracted to drop all OLE wires relating to the mains lines (both roads) to ground level/the 4ft to allow protection (robust protection by others), and to relocate the OLE over both roads of the electrics to a permanent design location.

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**Location:** Ardleigh Green Bridge, Essex

**Client:** Hochtief (UK) Ltd

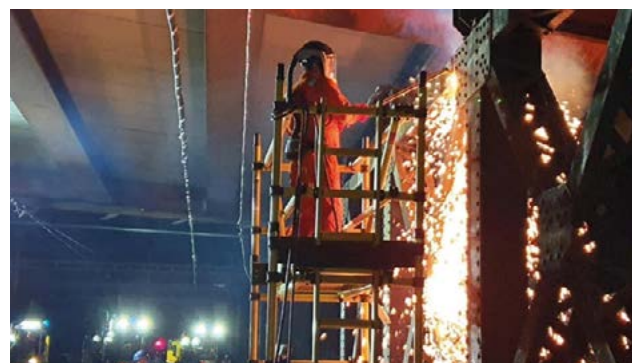
**Project Value:** £250,000

**Date:** December 2020

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## Challenges overcome

On further assessment of the job, REL proposed an alternative solution to complete the OLE works. In partnership with our designer (PBH) we revised the methodology to unclip the conductors from the temporary supports, mechanically protect using split ducting and raise up to a level just below the existing bridge deck. This method minimised the significant risk of lowering the OLE to the track as protecting this would have required the newly installed GEFW conductors to be cut and re-spliced which we believed would not be an acceptable solution.





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### Completed works

Once the demolition works were completed, REL installed new brackets to the permanent OLE design positions and raised the OLE over the mains onto the new brackets.

All of these works (inclusive of the demolition work) were undertaken during a Christmas possession of 101 hours, with a shorter isolation period of 94hrs.

Our new methodology significantly reduced the time and resource required and, more importantly, reduced the overall risk in the scope of works within the planned Christmas blockade.

“REL gave me a lot of confidence during our tender and contract award process, but were still an unknown quantity to me (and HUK). However, your performance on the ground matched the level of expectation created and was in short, excellent.”

**Tom King**

Project Manager, Hochtief (UK) Ltd



Delivered ahead of time with no accidents or incidents.

