

# Turnback Railway Bridge Repairs

Customized Lindapter Hollo-Bolts delivered a safe and efficient one-sided connection method for reinstating the structural integrity of the Oldfield Road Turnback Bridge.

## Project Background

**Location:** Oldfield Road, Manchester, UK

**Product:** Hollo-Bolt® by Lindapter® (custom, extended-bolt version)

**Quantity:** 700

**Client & Contractor:** Taziker

**Main Contractor:** Kier



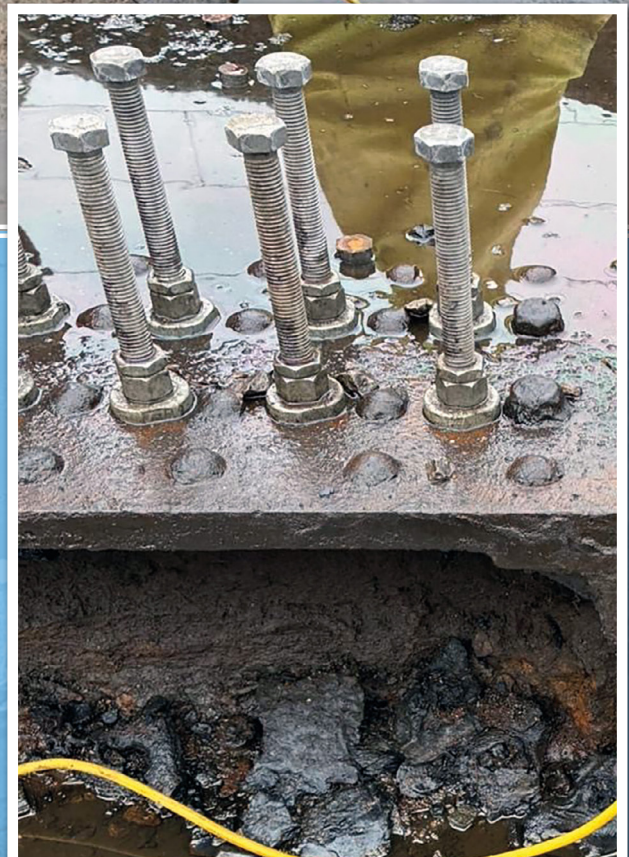
The Oldfield Road Turnback Bridge in Manchester required structural repair and refurbishment to restore strength and ensure safe operation of the railway turnback siding. As part of the repair works, existing ironwork plates needed to receive new shear stud fasteners to support loads and reinstate structural integrity.

Given the constraints of working on an existing railway bridge: limited access, complex geometry, and the need to minimize disruption to rail services, a custom solution was required rather than standard through-bolting or welding.

## Client Requirement

The client needed a secure, one-sided shear stud fastener solution that could be installed without through bolting or extensive welding and hot works, as access was only possible from one side of the existing ironwork plates. The solution had to transfer shear loads and integrate with the existing bridge fabric while complying with structural and safety requirements typical for railway bridge repairs, including load-bearing capacity, durability under dynamic loads, and ease of installation under site constraints.

Additionally, to minimize traffic disruption and reduce installation time, the system needed to support a rapid, repeatable installation process.



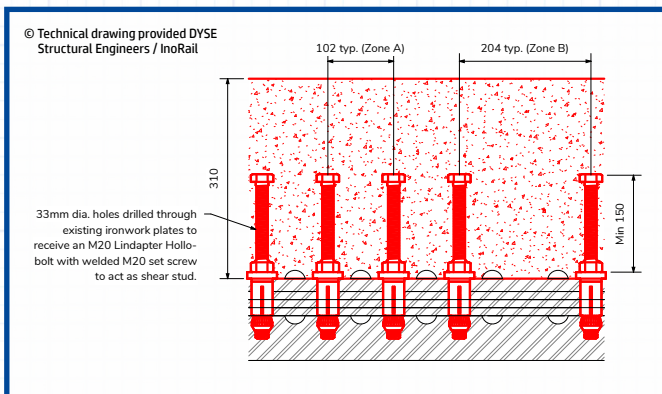
Lindapter Hollo-Bolts were adapted using a longer bolt variant to act as a one-sided shear stud fastener

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## Design Solution

To meet these requirements, Lindapter standard Holo-Bolts were adapted using a longer bolt variant to act as a one-sided shear stud fastener. Specifically, 1 1/4" diameter holes were drilled through the existing ironwork plates, and the extended Holo-Bolts, fitted with welded 3/4" set screws, were used to create a secure shear stud anchor.

This custom adaptation allowed the contractor to benefit from Holo-Bolt's inherent advantages, the ability to fix from one side, high structural strength, and elimination of field welding or through-bolting, while providing a robust, load-bearing shear connection suitable for the bridge repair context.

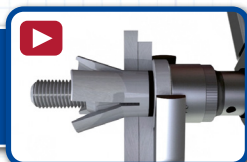


## Installation

During installation, the contractor drilled 1 1/4" diameter holes through the existing bridge ironwork plates to accommodate the extended Holo-Bolts. Once inserted, the Holo-Bolts, modified to include welded 3/4" set screws, were tightened to specification, providing reliable shear-stud fastener that anchored new structural elements to the existing fabric.

The one-sided installation method meant that access constraints did not hinder progress, and the absence of welding reduced field risks and minimized disruption to rail operations. The custom solution also streamlined logistics and allowed for a repeatable, controlled installation process across multiple fasteners.

[Click here to watch the installation video >>>](#)

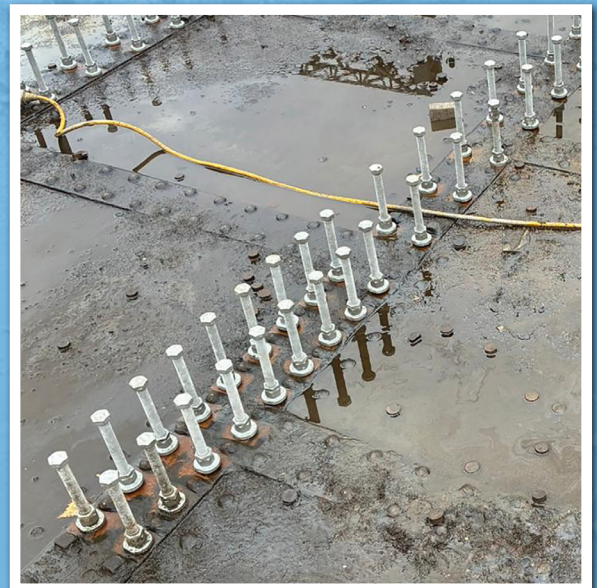


## Result

The custom Holo-Bolt solution delivered a durable, high-strength set of shear-stud connections that restored the structural integrity of the Oldfield Road Turnback Bridge without needing invasive welding or through-bolting.

The one-sided installation reduced labor time, improved site safety, and minimized disruption to rail services, a critical benefit in a live railway environment.

The project successfully met structural requirements while leveraging standard Lindapter products in a custom configuration, demonstrating the flexibility and reliability of the Holo-Bolt in demanding bridge-repair projects.



## Key Benefits

- ✓ Fast installation from one side with no drilling or welding required.
- ✓ Reduced downtime and minimized disruption.
- ✓ Significant cost savings from reduced labor and fewer components.
- ✓ Strong, durable load-bearing solution compliant with structural requirements.

