



Project Name: Skip Bridge Refurbishment

Client: North Yorkshire County Council

Value: £250,000

Date: Jan 2018 – April 2018

Skip Bridge was awarded to Hinko Construction in October 2017 with a Jan 2018 start date.



The structure has suffered from settlement and rotation at its abutments over the last 30 years to the point where the expansion gap at the structures free end was fully closed, thus the bridge was not moving as per its design.

The scheme included lifting the whole structure at its abutments 96mm on the West and 57mm on the East, bringing the alignment of the bridge back to its original profile.

The scheme also included bearing replacement at the abutments and concrete repairs to the abutment bearing shelves, piers and ballast walls, joint replacement and new VRS with HA compliant Parapet Transition.

To complicate the works further the structure had to remain open to traffic at all times during the works which meant the production of a detailed temporary works scheme and AIP document. In addition to this the bridge crossed the River Nidd which was prone to flash flooding.

The first phase of the project was concrete repairs, this included breaking out defective concrete, there were substantial amount of repairs to undertake on the structure, care had to be taken to ensure that the works has no environmental or ecological impact.



A clearly defined ecological action plan was devised to ensure that any incident could be dealt with promptly.



The structure was jacked to level on a night closure of the road, once to level temporary works packers were in place temporary ramps were installed to accommodate the new road level.

This allowed operatives to excavate down and expose the ballast walls which were in poor condition and required extensive remediation.

The Hinko team worked Closely with the NYCC site representative to determine the vest course of action to remediate the diaphragm wall.

The works involved removal of defective concrete and rebar and replacement as and where required.

High Strength Micro Concrete was used to remediate the diaphragm wall, giving durable solution to the defect.



Once the diaphragm was complete the site team could then construct the new Ballast Wall, this was offset 30mm to allow for bridge movement.

Hinko's in house resource undertook all the works giving the quality standard expected for the project.



Hinko has found that by employing staff directly and management of all aspects of construction is much easier with everybody pulling in the same direction.



Simultaneously the site team worked on the bridges bearing shelves replacing the Honel Drains and bearings. Once complete the structure was released from the temporary works and the bridge rested on the new bearings.

Concurrently the new VRS and Parapet transitions were installed at deck level. Once in place the works were repeated on the second half of the structure prior to resurfacing and joint works.



Through close collaboration between suppliers / sub-contractors and client the project was delivered on time on budget and in line with safety and environmental expectations.