

SDG

STRONGER
TOGETHER

ST DOMINIC'S BRIDGE RESTORATION DROGHEDA

MAIN CONTRACTOR

Jons Civil Engineering Company Ltd

CONSULTING ENGINEER

O'Connor Sutton Cronin

DATE

2022

PROJECT SUMMARY

St. Dominic's Bridge, a historic landmark connecting Drogheda's town centre, holds a significant place in the local community's collective memory. Built in 1863 by Grendons of Drogheda, the bridge once served as a vital transportation artery for both pedestrians and motor vehicles. However, in the 1970s, it was replaced by "The Bridge of Peace," limiting its usage exclusively to pedestrians.

In an effort to revitalise this structure and promote sustainable mobility in the region, a restoration project was undertaken for St. Dominic's Bridge. SDG took pride in playing our part in the project. Our Calenberg Bridge Bearings ensure the structural integrity and safety of the restored bridge, further enhancing its value as a vital pedestrian link for the local community.



THE CHALLENGE

The comprehensive refurbishment plan for St Dominic's Bridge encompassed a series of enhancements, central to which is the replacement of bridge bearings to ensure the longevity and safety of the structure. The reinforcement of the pier columns with composite epoxy fabric to fortify the bridge's base, while the replacement of horizontal ties and cross bracing members to restore structural integrity. Concrete edge beams needed repaired, and areas with significant cross-section loss were to be strengthened or replaced. This strategic plan aimed to revitalise the bridge, prioritising its durability and functionality.

With most long span bridges, thermal expansion is a force which needs to be accommodated through movement design. Without consideration for movement, the structure can be placed under excessive and detrimental stress.

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OUR SOLUTION

To accommodate structural movements, Calenberg S65 was employed as a permanently elastic articulating deformation bearing. This innovative bearing will work to effectively transfer superstructure movement into the fixed substructure.

By utilising these advanced Calenberg bearings, the new bridge structure exhibited improved structural resilience compared to the previous design. This enhanced capability allows the bridge span to withstand the dynamic forces and stresses exerted on it, ensuring long-term durability and stability. These innovative bearings enabled the structure to adapt and move in tandem over time, effectively eliminating the risk of deterioration of the bridge.



THE RESULTS

The St Dominic's Bridge refurbished project, an ICE Awards finalist in 2023, has enhanced the area into an environmentally friendly green space for use by the public and is promoting sustainable living providing a high-quality cycle and foot way in this central location. The removal of the old tarmac and concrete surfacing, replaced with granite like paved and seating areas.

This project was a great example for collaborative working between the design team O'Connor Sutton Cronin and the construction team of Jons Civil Engineering and Gabriel Hughes (Steel Specialist) to ensure the best outcome for the client and the public using the bridge. It has enhanced the life span of this original 18 century bridge and provides a strategic link from the town centre to the residential areas on the south western side of Drogheda.