

# River Suir Bridge (Ireland)



## Project Description

The River Suir Bridge is part of the N25 Waterford Bypass route near the bend in the river at Granny. The cable-stayed bridge with 230 m main span is the longest span bridge in Ireland. With its 112 m tall tower, it is a landmark structure for Waterford City and surrounding areas. The main structure consists of its tall tower with a series of stay cables which fan out from the top of the tower to support the main span at intervals of about 10 m. Corresponding cables fan to the back spans using the weight of the back span and anchor piles to balance the forces. The cable-stayed design removes the need for intermediate supports or piers in the river and permits a longer deck and a reduced deck thickness which means that there will be a great clearance for boats and craft to pass under the bridge.

The bridge is located in the Waterford Bypass route near the bend in the river at Granny



## mageba scope

mageba delivered 2 TENSA®MODULAR expansion joints of type LR7 with a total length of 27.80 m, which permit movements in all three directions and rotations about all three axis. The expansion joints were designed with shear studs for concrete connection.

Before opening to traffic, measurements on all 76 stay cables using a portable structural health monitoring system, providing data on actual cable forces and cable damping. Afterwards, a permanent health monitoring system was installed. The system includes 62 measurement channels in total. The data is automatically analysed on site and presented via the web interface, with an overview of the current situation and graphical representation of the overall performance to date.

Presentation of the measured data on a web interface



## Highlights & facts

### mageba products:

Type: TENSA®MODULAR expansion joints type LR7  
Structural health monitoring system

Features: with max. movement 560 mm

Installation: 2009

### Structure:

City: Waterford

Country: Ireland

Year of construction: 2006–2009

Type: Cable-stayed bridge

Length: 465 m

Constructor: Waterford JV (Dragados)

Owner: National Roads Authority

TENSA®MODULAR expansion joint at construction site ready for installation

