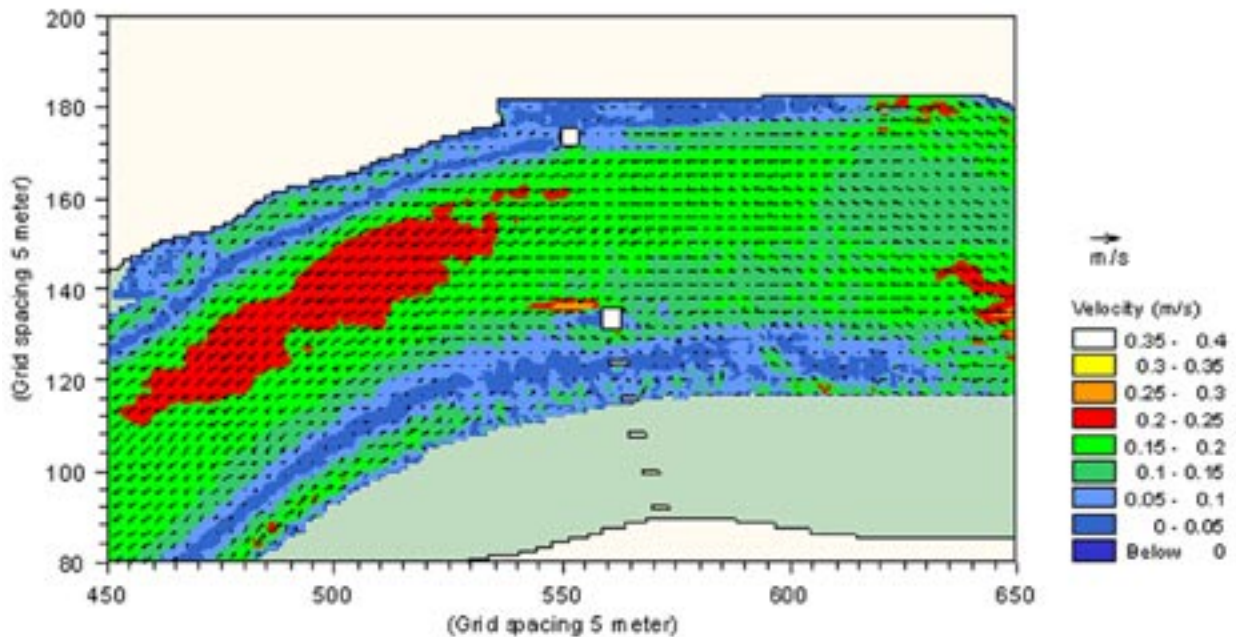


Limerick Southern Ring Road, Ireland



Velocity field for bridge solution at high water, out flowing water

The Limerick Southern Ring Road project will provide an eastwest bypass of the Limerick City by connecting route N18 towards Ennis with route N7 towards Dublin. Phase II of the project is the western part of the bypass which includes a fourth River Shannon Crossing.

Different crossing options have been investigated comprising an immersed tunnel, a low level opening bridge and high-level fixed bridges.

An environmental study was made for the three crossing options including hydrodynamic modelling of the blocking effect of the bridge piers and tunnel ramps using MIKE21 HD. The results of the current simulations were used as input to navigation simulations, sedimentation analysis using MIKE21 PA, and analysis of nutrient release using MIKE21 AD.

The tunnel option comprised a dual tube immersed concrete tunnel with a length of 620 m. The opening low level bridge had a bascule span with a length of 60 m across the naviga-

tion channel of the river. Ship simulation studies have been conducted to ascertain safe operational conditions for navigation. Total length is approximately 1,130 m.

The high level fixed bridges included both a haunched concrete girder solution and a cable stayed bridge with a composite bridge girder with main spans of 105 m and 210 m, respectively. The total length is approximately 2,050 m.



Project period: 2000 - date

The project is carried out by MCOS-COWI Joint Venture for National Roads Authority and others.