

Orwell Bridge study offers new hope for reducing high wind closures

Reducing the speed limit over the bridge during high winds, using temporary lane closures to mitigate the effect of high winds on vehicles, and keeping the bridge open in one direction are three potential solutions identified in the year-long study, commissioned by Highways England.

The report was carried out by independent experts at City, University of London using ground-breaking techniques designed specifically for the Orwell Bridge to create a more detailed picture than ever before of how wind speeds on the bridge affect different types of vehicles.

Highways England will take forward all the report's recommendations to assess their feasibility, with a view to introducing technology able to change the speed limit in high winds before the end of the year.

Simon Amor, head of planning and development for Highways England in the East of England, said:

We understand the vital importance of the Orwell Bridge for people living and working in Ipswich and also for the people and businesses that depend on goods arriving and leaving the UK at the port of Felixstowe.

Commissioning this study is just one of the steps we have taken to improve the resilience of this vital national asset when there are high winds in the area. Aerodynamic modelling is one of the most complex areas of engineering and we are grateful for the expertise that City, University of London have brought to this complex issue. I'm hugely encouraged that the study has identified these potentially workable solutions. We will take forward the next steps at pace and we're optimistic that we could have improvements in place by the end of the year.

The Orwell Bridge opened in 1982 and carries 60,000 vehicles a day. It stands up to 43 metres tall over the River Orwell, and traffic on the bridge can operate safely at head or tail wind speeds of up to 60mph (or 50mph when the wind is blowing from the side). Above these speeds there is a risk of vehicles being blown off course and causing collisions. Since 2013 the bridge has been closed on 18 occasions due to high winds. It is only closed when essential for safety reasons, and for as short a time as possible. In its findings, the aerodynamic study concluded that the thresholds for closing the bridge at the current 60mph limit are the correct ones for safety, but that reducing the traffic speed limit from 60mph down to 40mph during high winds could mean that the bridge may still be able to remain safely open during wind speeds of up to 70mph.

The findings are theoretical and will need to be validated in a physical environment using a wind tunnel. At the same time, Highways England will also start work on designing ways to introduce a changeable speed limit over the bridge.

The study is part of a series of measures being taken to improve the resilience of the Orwell Bridge. Already in recent years, revised signage has enabled closures to be installed and removed within a 20 minute period (rather than 50 minutes before) and a new protocol for making and communicating decisions about bridge closures to give road users more time to make decisions about their journeys.

Working together with partners, Highways England will also continue to look at any and all steps that can help improve the resilience of the Orwell Bridge and keep journeys on it safe and reliable.

General enquiries

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

Media enquiries

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.