

M11 Junction 7A, Highways England and Essex County Council

# Supporting growth, creating jobs, and linking communities in Harlow

**£43.5m**

/ Project value

**January 2020**

/ The project commenced

**March 2022**

/ The project was completed

The M11 Junction 7A is a critical new infrastructure project funded through National Highways and Essex County Council to create a new junction between the existing junctions 7 at Harlow and 8 at Stanstead. The works were carried out to improve access to the area's busy road network and help facilitate growth and better connectivity for residents, businesses and visitors.

## The brief

Providing a new east-west link through Essex town, the scheme saw the construction of a new link road and upgrade and extension of the existing Gilden Way carriageway. The new Mores Overbridge links the eastern and western sides of the new M11 Junction 7A which provides full connectivity with new northbound and southbound on-slips and off-slips.



**“We have created a much-needed new east-west link, significantly improving access to the M11 at Harlow. This, in turn, will help reduce congestion on the A414 and other routes in the town and also support future growth, including the potential creation of up to 3,000 new jobs.”**

**Lesley Wagland**

Essex County Council's Cabinet Member for Economic Renewal, Infrastructure and Planning

**“This was a massive operation, with excellent collaboration between many different teams and partners – ECC, GRAHAM, National Highways, Jacobs – and it was successful.”**

**Paul Crick**

Director for Performance, Investment and Delivery Place and Public Health, Essex County Council

**The challenges**

Gilden Way was widened from the London roundabout to Marsh Lane to create a three-lane road to provide an additional lane for traffic approaching Harlow. Traffic Management was a critical factor, as we were unable to close roads to complete the widening works. Liaising closely with National Highways we gathered information and sought advice about the best methods to manage and maintain traffic on the road without closure. A further challenge was the construction of the new Mores Overbridge over the live M11 carriageway. The weight of the beams and minimising the time need to complete works on the closed motorway were also recognised as uniquely challenging tasks requiring innovative construction methods.

**The solution**

A single lane of traffic was always maintained on Gilden Way by placing two-way traffic lights incrementally spread on each section of the carriageway to manage the traffic. This method allowed us more time and space to widen the road gradually with the least impact. Pre-modelling work with Aecom and other stakeholders helped us predict the traffic flow through numerous assessments. These created likely scenarios that we presented to the Essex County Council transport division to offer reassurance that our Traffic Management would have the least impact over a shorter period when compared to alternative methods. We utilised the vast engineering experience of our project team and supply chain partners to complete the delivery, lifting and installations of the bridge beams with no issues arising. Opting for a larger ‘crawler-type’ crane located off the carriageway meant we minimised the M11 overnight closures required to allow the safe installation of the beams. Only four overnight closures of the M11 were utilised to allow for the safe lifting and installation of the beams.

**Outputs & Benefits**

**Award-Winning:** Winner of the Green Apple Award 2021, the annual international campaign to recognise, reward and promote environmental best practice around the world.

- Considerate Constructors Scheme Award of Excellence, scoring 41 out of 50
- The project is registered under CEEQUAL for assessment as a Whole Project Award
- The scheme was commended by National Highways as one of the first to successfully implement a 60mph speed limits through narrow lane traffic management

**Design Management:** The bridge was constructed in two phases minimising the impact on the M11. The bridge has been designed and built with wide verges to accommodate future installation of services or diversions.

**Electric Plant:** The scheme trialled the use of a two-tonne fully electric excavator. The trial was used to determine the viability of such technologies for potential use on future sites as part of GRAHAM commitments to having net carbon emissions by 2045.

**Clean Energy:** We used TCP Ecolite TH200 Halogen Lighting Towers on our Gilden Way section of the scheme. Powered by BOC’s HYMERA fuel cell, these portable lighting towers use a chemical reaction to produce clean energy with water vapor as the only by-product.

**Archaeological finds:** A variety of historical periods were found during early archaeological investigation works including neolithic and early bronze age to middle bronze and iron age.



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