

# Delivering essential permanent infrastructure

## Bridging Case Study



## Polduwa Bridge, Sri Lanka

**Customer:** Sri Lankan Ministry of Highways, Ports and Shipping

**Solution:** Mabey Composite Atlas™



## The Challenge

The bustling city of Colombo is the capital city of Sri Lanka. However, like many developing cities, urban congestion is a problem. This has been exacerbated by increasing congestion on link roads with other urban centres, such as the growing administrative capital Sri Jayawardenapura Kotte, where the Sri Lankan Parliament and other administrative offices are based. Added to this was the need for improved water flow through the Diyawanna Lake as the old bridge constricted flow during periods of heavy rainfall.

To address this challenge, the Ministry of Highways launched a nationwide campaign to improve road links. This ongoing project will see widespread infrastructure work that will include the building or replacement of many bridges. As part of the Regional Bridge Phase II Project, there was a requirement for a major bridge reconstruction on the shores of the Diyawanna Lake that could accommodate Colombo city bound traffic.

## The Solution

In partnership with Access Engineering PLC, Mabey embarked on the reconstruction of the Polduwa Bridge in August 2013. The chosen system was the Mabey Composite Atlas™, which features a steel superstructure incorporating a traditional reinforced concrete deck resulting in a highly sturdy solution suited to both urban and rural applications. In keeping with the grandeur of the Parliament building, Polduwa Bridge incorporates two architectural arches, which has made the structure a landmark in its own right.

Adopting the modular decking system, the standard roadway widths of 4.2 metres (extra wide single lane) and 7.35 metres (two lanes) are available through the Mabey Composite Atlas™, which can be combined with internal pedestrian refuges to make up the total deck width.

The 71 metre Polduwa Bridge is considerably larger and more capable than its 36 metre predecessor, and consists of two 9.6 metre carriageways (six lanes), 1.2 metre wide central reservation, and two pedestrian walkways, while the bridge elevation is such that it will accommodate the safe passage of sailing boats and paddle-craft underneath. The bridge also features steel tubular archways which has resulted in the structure becoming a local sightseeing attraction.

During manufacture at Mabey, elements of the structure underwent trial erection before despatch to ensure problem-free assembly on site. The bridge was completed three months ahead of schedule.



## The Result

The Polduwa Bridge was opened 5th September 2014 by the Honourable Basil Rajapaksa, Minister of Economic Development. The bridge represents a significant milestone in the essential redevelopment of the road network and transport system in Sri Lanka and is in keeping with the President's Vision for the Future.

The key to the successful and timely construction was the close working relationship between Access Engineering PLC and Mabey for the turnkey construction, as well as the 24/7 efforts of the site team, and excessive off-site and preparatory work which minimised disruption and inconvenience to residents and motorists.

**Mabey Bridge Limited, Unit 9, Lydney Harbour Estate, Lydney, Gloucestershire GL15 4EJ, United Kingdom**

Office: +44 (0)1291 623 801 Email: [mail@mabeybridge.com](mailto:mail@mabeybridge.com) [www.mabey.com](http://www.mabey.com)

