

Travis Brow to A6 Link Road, Stockport

Stockport's 'single most important' strategic highway connection

£8m

/ Project value

May 2017

/ The project commenced

July 2019

/ The project was completed

Named as the "Project of the Year" at the 2019 Chartered Institution of Highways & Transportation (CIHT) North West Awards, the Travis Brow to A6 Link Road project has created an important new strategic highway connection in Stockport. A core component of the Stockport Town Centre Access Plan (TCAP), one of Stockport Metropolitan Borough Council's (SMBC) "most ambitious" programmes, the Link Road has improved the efficiency and reliability of the town's highways network. Our work has been praised for meeting the key objectives of "achieving best value, minimising disruption and efficient delivery". Significantly, the implementation of an intelligent design solution enabled a two lane dual-carriageway to be formed through a single arch.

The brief

Awarded through Highways England's Collaborative Delivery Framework, the £8m project's brief was the delivery of a new classified Link Road approximately 390m in length, and retaining walls to carry the Link Road under a Grade II listed Stockport Viaduct, which dates back to the 1840s. New traffic signals, the creation of new shared use pedestrian, and cycle, paths, and a new cycling route were also deliverables of the scheme.



"Throughout delivery they (GRAHAM) have met all the key objectives of achieving best value, minimising disruption and efficient delivery, living up to the project's mission of 'we all succeed together'."

Tim Lawton
Project Director,
Stockport Metropolitan Borough Council

“The retaining structures’ designs truly represent outstanding sustainable and best value solutions. GRAHAM has delivered the new Link Road in a collaborative, efficient and sustainable way, taking great care to minimise the impact of construction works on local stakeholders and the wider community.”

Tim Lawton
Project Director, Stockport Metropolitan Borough Council

The challenges

The horizontal and vertical alignment of the new multi-lane carriageway was constrained at either end of the circa 400m scheme, and further restricted by the requirement for a new signalised junction with the existing Travis Brow highway. In addition, the new carriageway bisected the Stockport Viaduct, with the alignment undercutting the pad foundations of the 1840s Grade II listed Viaduct, which carries the West Coast Main Line. Having been widened to accommodate four tracks in the 1880s, the Viaduct is founded at two significantly different levels featuring stepped profiles. To complicate matters further, the disused and partially infilled Wellington Road Railway Tunnel intersects the Viaduct at a skew through the same span as the proposed highway.

The solution

The total construction programme was approximately £8m with the geotechnical works valued at circa £3m. Innovation was required to support the exposed rock face beneath the Viaduct foundations, whilst also restricting movements to negligible levels during the construction phase, which was a key Network Rail requirement. Our intelligent solution utilised pre-stressed rock anchors, with a near vertical hard shotcrete facing. The retaining structure was then covered by mass concrete, to protect against vehicle impact and corrosion. The anchors were installed using a detailed construction sequence, employing vertical and horizontal excavation in distinct bays. In partnership with designers Mott McDonald, we value engineered the original SMBC outline design, resulting in substantial cost savings through the replacement of 225m of retaining walls, equating to 60% of the project’s original retaining walls.

Outputs & Benefits

- Impact:** Our collaborative design and construction effort reduced the overall project costs for SMBC, while providing a visually improved overall landscaped scheme
- Bridge strikes:** Our work has helped to reduce bridge strikes on George’s Road where regular strikes had previously caused significant disruption to the road and rail networks
- Segregated pedestrian and cycle lanes:** These have created an important east-west local sustainable transport link north of the town centre
- Engineered fill:** 10,000 tonnes of excavated brickwork were recycled by crushing and turned into engineered fill for the construction of the embankments and temporary works piling
- Collaboration:** Our construction methodology was designed to enable a key road (providing access to B&Q and Decathlon) to be opened at weekends in recognition of busy retail trading



For more information on how we’re delivering lasting impact:

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