NOTTINGHAM EXPRESS TRANSIT PHASE 2

KEY FACTS

CLIENT
MILLER BIRCH / BLUEPRINT / MOTT MACDONALD / NOTTS REGENERATION LTD / TRAMLINK NOTTS / NOTTINGHAM CITY COUNCIL

YEAR COMPLETED
2015

CONSTRUCTION COST
£570M

PROJECT DESCRIPTION

BWB played a key role in Nottingham’s NET Phase 2 tram extension, delivering transport, traffic signal and infrastructure design services. The £570m scheme has extended the lines to Chilwell and Clifton, more than doubling the size of the city’s tram network by adding 11 miles of track, 28 stations and 22 trams.

BWB has been involved for over a decade, initially providing detailed traffic modelling and highway design of junctions on projects that connect to the tram route including ng2 Business Park, Highfields Science Park and Medi-Park. Following this the NET Promoter appointed BWB for the Advanced Design Phase of the scheme where we reviewed and redesigned five shared-use traffic signal controlled junctions on the tram route through Beeston town centre. We were later commissioned by Nottingham City Council to assist them in checking the detailed design proposals prepared by the scheme’s external design team.

The extension opened to the public in August 2015 and it is anticipated that the scheme could help generate £300 million a year for the local economy and help create up to 8,000 jobs.

SERVICES PROVIDED

Traffic Signals
Infrastructure Design
Micro-Simulation Modelling
Rail
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KEY CHALLENGES & SOLUTIONS

Our initial involvement was made in 2005 on the ng2 Business Park project. BWB played a pivotal role in extensive lobbying on behalf of developer Miller Birch to influence the NET Phase II proposals for the Chilwell Line that runs through the ng2 site. We successfully negotiated alternative tram stop arrangements that deliver safer pedestrian access to the stops within the site and worked closely with the NET Promoter to develop access arrangements capable of future modification to accommodate the tram route.

Our next input came in 2006 during the Highfields Science Park project, a deceptively complex development site where the previous owners had failed to deliver viable redevelopment proposals. In securing planning consent and delivering the first phase of built development, BWB developed a radical alternative to the published proposals for NET Phase II in the vicinity of the site. Our alternative signalised gyratory scheme delivered a junction capable of accommodating development traffic satisfactorily and a layout capable of being readily modified to accommodate future construction of NET Phase II.

The following year BWB was appointed by the NET Promoter for the Advanced Design Phase of the NET 2 programme. We were instrumental in reviewing and redesigning five shared-use traffic signal controlled junctions on the tram route through Beeston town centre, producing a complex TRANSYT model of the Beeston area and revised junction layout designs which were all fed into a microsimulation model used to demonstrate the impact of the tram on other highway users and to prove the business case of the NET2 scheme.

NET Phase II’s Chilwell Line bisected the site of the proposed Medi-Park development adjacent to Nottingham’s Queens Medical Centre. Access arrangements for the development had to cater not
only for additional vehicular movements generated by Medi-Park, but also integrate with the proposed tram layout. BWB developed an alternative to the published proposals for the NET scheme that rationalised and improved the layout of the adjacent Abbey Bridge signalised junction to provide greater traffic capacity and improve tram journey times through the junction. Our alternative layout was subsequently adopted by the NET Promoter as their preferred junction design.

BWB was appointed by Tramlink Nottingham during the NET Phase II concessionaire selection process on the Beeston Town Centre Interchange project. Our brief was to review the proposed bus and tram interchange in Beeston Town Centre to see if it could be modified to incorporate a turn-back facility to enable an enhanced Beeston service to be operated. Our design layout for the bus and tram interchange introduced cross platform interchange into the design, which provides a much improved facility for passengers. As part of our work BWB reviewed operation of the nearby traffic signal junctions to ensure that required changes would not affect junction capacity or tram run times and our design was successfully incorporated into the approved scheme.

Our next input came in 2012 for the NET Phase II Implementation when BWB’s traffic signals design specialist was seconded to Mott MacDonald in order to assist in the detailed design of traffic signals controlled junctions on the Chilwell line. Following this BWB was appointed by Nottingham City Council to assist them in checking the detailed design proposals prepared by their design team related to Highway Geometry, Drainage, Signage and Traffic Signals. The council needed our support to help them meet the challenging checking and approval programme arising from an accelerated design programme initiated by the Concessionaire, Tramlink Nottingham. The appointment was recognition of the trust and reliance that had been gained through our considerable involvement through the project lifecycle.
KEY CONTACTS

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