

The A1 Trunk Road

The A1 is the UK's longest numbered road, dating back to the 1920's, when it reflected the importance of the link between London and Edinburgh.

In 1952, the Great North Road passed through the region's towns and city centres – local and through traffic sharing the same space with pedestrians in Darlington, Durham, Gateshead and Northumberland Street in Newcastle. Further north, it was forced through pinch-points such as the ancient Bondgate Tower in Alwick.

Sixty years later, the A1 has been replaced by the A1(M) motorway in County Durham, while Tyne & Wear and Northumberland has seen gradual improvements (and diversions) to the route. It remains the primary road link north and south of the region, despite its mix of improved and unimproved sections.





A1(M) in the North East

The principle of a new A1 trunk route through County Durham was first established in the 1930's with the building of bypasses for Birtley and Chester-le-Street, along with plans for a Darlington bypass. That proposal didn't come to fruition until 1956 when the bypass was included in the national network of new Motorways by the Ministry of Transport. Construction commenced in 1961 and included 10.5 miles of motorway between Darlington and Barton, a two mile spur road into the town, 9.5 miles of load road reconstruction and 34 bridges. It was opened in May 1965 at a cost of £6.5m.

Design work on a further 22 mile stretch of the 'Durham Motorway', between Darlington and Chester-le-Street, started in 1958 with construction broken down into four sections, each costing between £3m and £4m. The route opened fully to traffic in September 1969 and included a total of 60 bridges and two major structures – Lumley Dene Bridge, a steel arch box-girder construction spanning 330 feet across and 80 feet above a valley of considerable natural beauty, and the River Wear Bridge at Chester-le-Street with a reinforced concrete span totalling 345 feet.

North of the Durham Motorway, the Birtley bypass was completed in 1970 – a 2.5 mile stretch that followed the same alignment as the improvements of the 1930's and, at the time, was the only 3-lane motorway north of the M1. Around the same time also saw construction of the White Mare Pool to Black Fell scheme, which extended the A1(M) to the Tyne Tunnel. Just a few miles further north, the completion of the Gateshead Western Bypass, in 1974, marked the start of the A1 route as we know today, and which was eventually extended as part of the Newcastle Western Bypass in 1990. Upon that scheme's opening, the A1(M) to the Tyne Tunnel was re-designated the A194(M).

The A1(M) schemes mentioned above were the first contracts prepared and supervised by the Durham County Council Sub-Unit of the North Eastern Road Construction Unit – a body which subsequently managed the design and construction of many trunk road and motorway schemes, from Berwick in the north to the M62 in the south.

While large-scale improvements have been ongoing to the A1 in neighbouring North Yorkshire since the mid 1990s, there has been little change in County Durham since the original schemes were completed, save for limited widening to accommodate overtaking lanes at steeper gradients. Despite this, the network has served the North East effectively for over 40 years.



A1 Newcastle Western Bypass

A significant scheme in every way – the Newcastle Western Bypass was, at the time, the most important project in the national trunk road programme, seen as key to unlocking improved road conditions and economic growth in the north. First suggested in 1936, it was featured in development documents from 1945, but not added to the Trunk Road Programme until 1977. The preferred route was announced in 1981, modified in 1984 and Statutory Orders published in 1985. Despite 200 objections to the scheme, the subsequent public inquiry lasted only 10 days.

The total cost of the scheme was £117m and attracted a European Regional Development Fund grant of £23m – the largest to be awarded in the UK at that time. A ceremonial sod cutting on 24th April 1987 by then Secretary of State for Transport, John Moore, marked the start of a three year construction project, split across four contracts, delivered by Balfour Beatty Construction Ltd, Cementation Projects Ltd, Edmund Nutall Ltd and Peter Birse Ltd. Consulting Engineer was Bullen & Partners, along with Landscape Architect Anthony Walker & Partners.





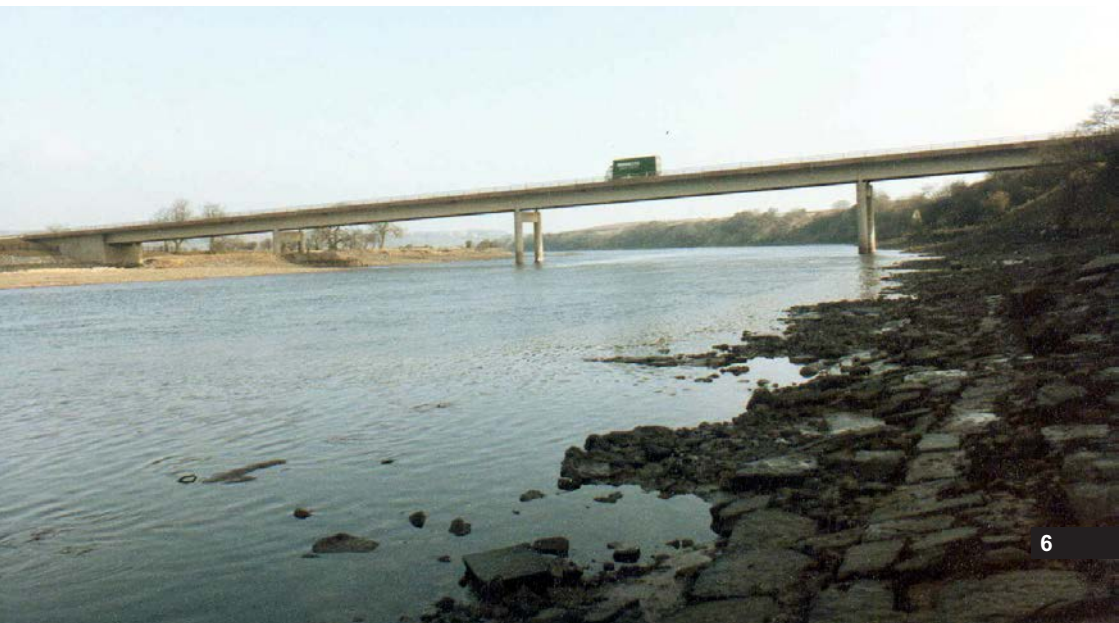
The scheme comprised of an 11km dual two and three lane carriageway and provided a direct link between the Gateshead bypass and the A1 at Gosforth, including seven grade-separated junctions. The most significant feature is the Blaydon Bridge and Blaydon Haughs Viaduct which crosses the River Tyne, the A695 Chain Bridge Road and the Newcastle to Carlisle railway towards the Metro Centre shopping complex. The bridge design – a pre-stressed concrete box structure – was subsequently accepted by the Royal Fine Art Commission. Another major structure was the Fawdon railway bridge, which carries the Metro over the bypass. This was constructed offline and slid into position over the course of one 30 hour possession period.

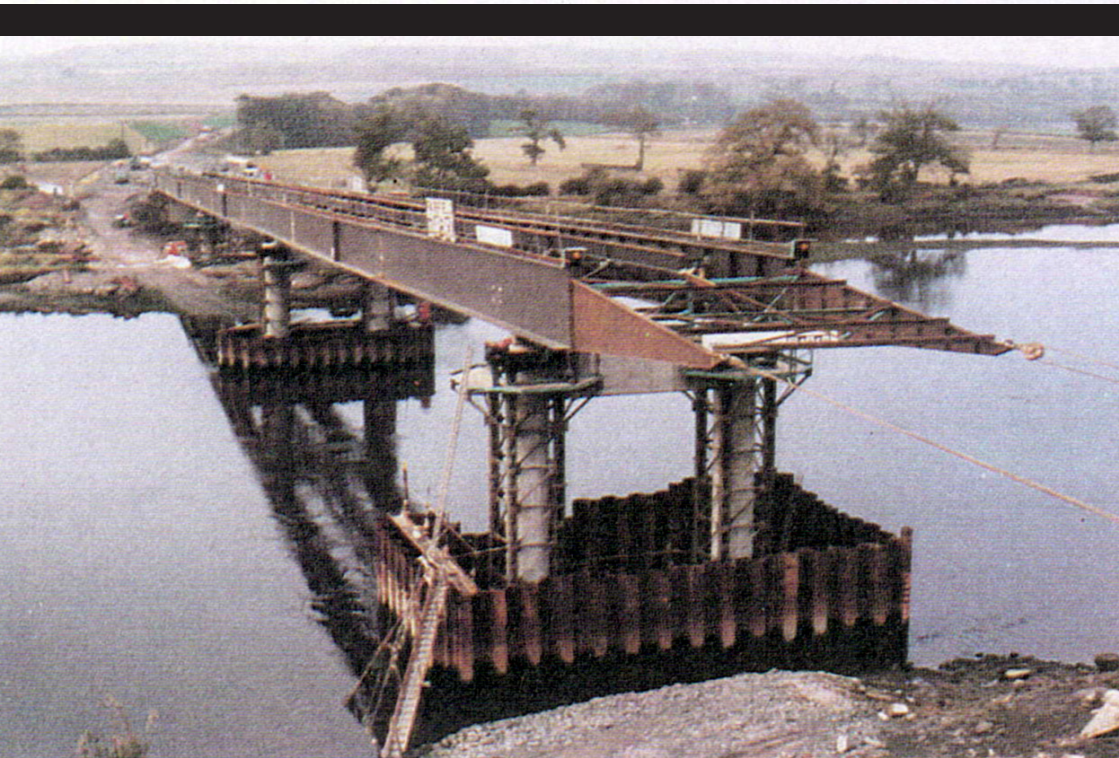
The Blaydon Bridge was officially opened by Her Majesty the Queen on 1st December 1990, following in the tradition of bridges over the River Tyne being opened by a member of the Royal Family – before and since. Upon completion of the full scheme, the route of the A1 trunk road was signposted away from the Tyne Tunnel at Birtley and onto the Gateshead and Newcastle Western Bypass, eventually linking up to its old alignment at Seaton Burn, with what is now the A19 junction.

Newcastle to the Scottish Border

The first significant improvements to the A1 between Newcastle and the Scottish border saw the openings of the Seaton Burn, Blagdon and Morpeth bypasses in 1970. Built to 2-lane dual carriageway standard the schemes marked the start of a 15 year period of upgrades. A bypass of Alnwick (also 1970) was followed by Warrenford (1978), Felton (1981), Belford and Berwick-upon-Tweed (1983). However these were single-carriageway improvements as traffic flows on the A1 further north in Northumberland did not justify the cost of dualling. It highlights the contrast between 1970s and 1980s approach to upgrading the road, the former presumably more policy-led, the latter emphasising cost-benefits, as the economic appraisal of schemes came to the fore.

Despite it no longer being a matter of course, the Stanington Bridge to Clifton improvement (1987) was economically justified to complete the dual-carriageway between Newcastle and Morpeth, as was a small improvements at Brownieside, north of Alnwick, in 1993.





A1 Berwick Bypass and Tweed Bridge

Designed and supervised by the DCC Road Construction Sub Unit, this scheme was completed in 1983 at a cost of £9.5m. Its main structure is the 195 metre River Tweed Bridge, with four spans, including a maximum span of 56m. Temporary piers were constructed within steel sheetpile cofferdams on both sides of the river; the bridge deck was assembled on the south bank and launched across the river using an attached nosing girder.

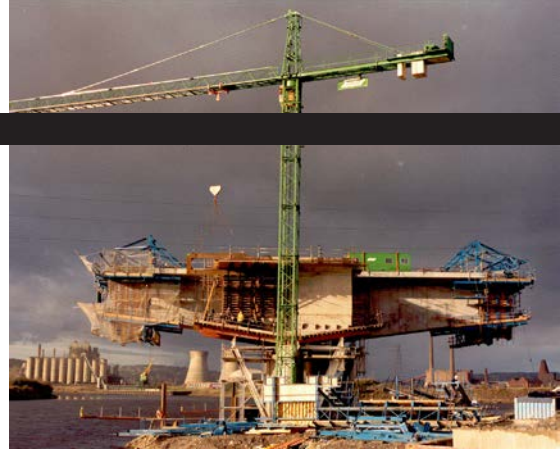
Route Management and Future Improvements

In 1999 the Highways Agency published a Route Management Strategy for a ten year period, which advocated the continued approach of localised dualling and traffic safety improvements. Borne out of this was the Willowburn to Denwick improvement (2003), which dualled 4km of single carriageway east of Alnwick, and a grade separated junction at Stannington (2004), which allowed four central reservation crossings to be closed, a permanent 50mph speed limit to be lifted and mitigated severance between the west and east sides of Stannington village.

Two further dualling schemes, Morpeth to Felton, and Adderstone to Belford were in advanced stages of preparation until funding pressures on the North East Regional Transport Board saw them dropped in July 2006. Nearly five years later, the A1 through Northumberland was reclassified to a route of national strategic importance, meaning any further improvements would now be funded centrally by the Department for Transport.

Campaigns to complete the dualling of the A1 through Northumberland, on both economic and safety grounds remain vigorous.





Thanks to Tony Robinson of CIHT, North Eastern Branch, for preparing this article. Tony is a Transport Planner at Jacobs UK Ltd, in Newcastle upon Tyne

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