

Technical Note

Project:	M4 Junction 17 MRN Outline Business Case		
Subject:	Appendix E1: Evidence of project delivery (Management Dimension)		
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This note supports the Management Dimension of the M4 Junction 17 MRN Outline Business Case (WC_M4J17-ATK-GEN-XX-RP-TB-000001). It provides additional details in relation to Wiltshire Council's project delivery experience.

1.1. M4 Junction 17 delivery requirements and evidence of similar projects

The M4 Junction 17 scheme is a relatively typical highways infrastructure project comprising junction capacity improvement through carriageway widening and traffic signals installation, within the extents of the existing highway boundary.

Wiltshire Council has a strong track record in delivering transport infrastructure schemes, including major schemes on the A350 route, and a previous improvement scheme at M4 Junction 17 itself. It is confident that the planned project can be completed within the stated timescales and milestones. The types of works involved are considered to be within the capability and expertise of the delivery team (including any appointed consultants and contractors) and prior experience, best practice and lessons learnt can be applied directly to the delivery of this project.

Collaborative working

In 2020, Wiltshire Highways Service (comprising Wiltshire Council, Atkins Limited, Tarmac and Ringway) won the Institute for Collaborative Working public sector award for collaborative working sponsored by the British Standards Institute. Together, the four organisations established a Collaboration Board and co-created a Partnering Charter that set the vision and success measures for their collaborative relationship. Working together the partnership is driving efficiencies, improving quality and programme certainty to deliver better outcomes for the end customer, the Wiltshire community. This model of successful collaborative working between local authority, consultant and contractors will be applied to the delivery of future schemes and contracts.

1.1.1. M4 Junction 17 – partial signalisation scheme

Wiltshire Council successfully delivered a previous partial traffic signalisation scheme at M4 J17 in close collaboration with National Highways (previously Highways England). The works, which were delivered between August 2017 and October 2018, included the installation of traffic signals at the ends of the motorway off-slip roads to control the build-up of queues along the slip roads and help prevent these backing up onto the main line of the motorway. The scheme, which was partially funded through Local Growth Fund, was delivered through a Section 6 and Section 8 Agreement with Highways England. Highways England representatives were closely involved throughout the development and delivery of the scheme, including attendance at perioding traffic management coordination meetings and at project progress meetings.

1.1.2. A350 Chippenham Bypass improvements

In recent years Wiltshire Council has successfully implemented a series of upgrades to the A350 around Chippenham, towards the northern end of the route. A key element of the delivery of these staged works has been minimising impacts on users throughout construction.

North of Chippenham

The A350 North of Chippenham (**Error! Reference source not found.**) had a delivery budget of £2.7m, funded partly through the Government's Local Pinch Point Fund. The scheme comprised of a combination of road widening and junction improvements, consisting of:

- Widening the A350 to dual two lanes in both directions between the Badger and Malmesbury Road Roundabouts;
- Minor adjustments to the Badger Roundabout;
- Improvements to Malmesbury Road Roundabout; and
- Widening A350 to two lanes southbound between Jackson's Lane and Malmesbury Road Roundabout.

The scheme aimed to reduce congestion and increase journey time certainty and savings. The scheme also set out to help achieve Gross Value Added to the local economy of £5.9 million, through the creation of additional jobs.

The scheme was originally set to be completed in December 2014. Some design complications were encountered but these were successfully resolved, with only a small impact on timescales, and construction was completed in February 2015. The outturn construction cost was £3.82m, with additional funding being provided by Wiltshire Council. The opportunity was taken to undertake additional maintenance work on adjacent sections of the road whilst the contractor and traffic management were available in order to minimise disruption to the travelling public.

Figure 1 - A350 North of Chippenham construction



Bumpers Farm

The Bumpers Farm Improvements, completed in February 2016, was a £3.4 million scheme funded by the Local Growth Fund (LGF). This delivered increased capacity along the A350 Chippenham Bypass near Bumpers Farm roundabout. The scheme consisted of:

- Widening the A350 to dual two-lane between Brook and Bumpers Farm roundabouts;
- Additional widening of the A350 for approximately 250m north of Brook roundabout;
- Widening the A350 to dual two-lane for a short stretch immediately south of Bumpers Farm roundabout; and
- Minor widening of Bumpers Farm Industrial Estate entry arm to Bumpers Farm roundabout.

The scheme was programmed for a 38-week construction period. Despite minor design changes the works were completed 7 weeks ahead of schedule. The scheme quarterly spend profile matched that forecast in the Full Business Case and the project was completed to budget.

Badger-Brook & Chequers

The Badger-Brook & Chequers Improvements, completed in early 2019, was a £7.2 million scheme funded by the LGF with a small local contribution. This delivered capacity enhancements at Chequers roundabout and on the A350 between Badgers and Brook roundabouts. The scheme consisted of:

- Widening the section of the A350 between Badger and Brook roundabouts to dual two-lane;
- Widening the A350 between a point approximately 250m north of Cepen Park South roundabout and a point approximately 250m south of Chequers Roundabout; and
- Minor works to the A4 either side of Chequers roundabout.

The scheme was programmed for a 14-month construction period, due to be complete in August 2018. Minor delays, due general project over-runs, meant the operational benefits of the scheme were not being realised until October 2018 and final minor works completed in January 2019.

Figure 2 – A350 Badger Brook and Chequers Improvements, collaborative delivery



Figure 3 – A350 Badger Brook and Chequers Improvements



1.1.3. A350 Farmers Roundabout

The A350 Farmers Roundabout scheme, completed in October 2019, was a £3m scheme that was largely funded through the DfT's National Productivity Investment Funding (NPIF). This scheme delivered capacity enhancements at Farmers Roundabout on the A350 at Melksham.

The scheme consisted of:

- The installation of the new traffic signal system at Farmers Roundabout;
- Road widening works on the approaches to the roundabout, and around the circulatory carriageway;
- Repair works to the bridge joints at Challeymead Bridge;
- Drainage and ditch improvement work;
- Extension and widening works to the merge taper at Semington Road Roundabout; and
- Extensive carriageway resurfacing works extending as far as the A365 junction in the north to Semington Road Roundabout in the south.

Site operations commenced on Monday 4th February 2019, and the works were completed within the planned 9 months duration. Challenging ground conditions and the discovery of unforeseen and uncharted buried services did cause problems. But the Contractor worked alongside Wiltshire Council and the Site Supervision Team to redeploy resources and open up new work areas as necessary to mitigate delays to the overall programme whilst those issues were overcome.

During the scheme delivery, efforts were made by the Contractor and the wider site team to embark on a series of activities aimed at community liaison and involvement. Furthermore, the Contractor sought to undertake the works as efficiently as possible whilst minimising the impacts on traffic flows. This entailed restricting those site operations that required lane closures to the day-time off peak period (9:30am – 3:00pm), and the use of night works where this was both practical and realistic. The traffic management aspects of the scheme were challenging, but the flexible and responsive approach taken by the Contractor to restrict traffic management durations and lift lane closures during lunch breaks, generally minimised disruption, and peak hour traffic flows were largely unaffected by the works.

Figure 4 – A350 Farmers Roundabout Improvement

