

DBFO1 M1/Westlink/M2

# Breaking new ground with first DBFO PPP road scheme

**£139m**

/ Capital value

**February 2006**

/ The build commenced

**November 2009**

/ The build was completed

Estimated to have saved the local economy £25 million by way of the advanced opening of a key programme road (Broadway Underpass), 13 months ahead of schedule, the Design, Build, Finance and Operate (DBFO) 1 project has transformed Northern Ireland's most important motorway and infrastructure network. In the first road scheme procured using the DBFO form of Public Private Partnership, we were the lead economic operator in the design, construction and finance of the road improvements through a Joint Venture with three companies in equal share – Highways Management Group (HMG). HMG (GRAHAM, Northstone Ltd and Bilfinger Berger) will operate and maintain the network for a period of 30 years.

**The brief**

Split into four schemes, the DBFO 1 project represents the most high-profile motorway and infrastructure reconfiguration ever undertaken in Northern Ireland. Breaking the mould for its procurement process, DRD's ambition was to significantly modernise, upgrade and replace key elements of its primary road network, including the main arterial routes to Belfast City Centre.



**"It is important to acknowledge the contractor's excellent safety record on this major scheme, which has been delivered without any serious accidents."**

Conor Murphy  
Roads Minister

“The limited impact of the works on traffic is a result of careful planning by Roads Service and the contractor and the introduction of a range of temporary traffic management measures to minimise disruption. These included the creation of two new park and ride sites at Blacks Road and Sprucefield, with a dedicated bus service along the M1 hard shoulder.”

Conor Murphy  
Roads Minister

### The challenges

With a capital value of £139m, the DBFO 1 project's four schemes were constructed while traffic was maintained through the network, requiring the facilitation of over 65,000 vehicles per day on the A12 and 65,000 vehicles on the M2. Reducing traffic disruption was critical throughout the 3.5-year programme. As such, robust traffic management arrangements were adopted including 187 installations as well as split lane, contraflow and narrow lane systems to provide two lanes in both directions on the M1, M2 and A12. There were no accidents as a result.

### The solution

The ambitious DBFO 1 project involved the upgrade of the motorway network into Belfast from the North and South, as well as the enhancement of the A12 Westlink. Split into four schemes, the 45-month programme was delivered by almost 500 people over 2.4 million 'man-hours' and featured the management of 141 suppliers and 80 sub-contractors. Completed five-months ahead of schedule, with each key milestone similarly achieved early, the project was notable for its high quality design – achieved through our effective coordination of multi-discipline engineers. Inclusive of two underpasses, four replacement bridges, one steel footbridge and six bridge strengthening works, the DBFO 1 project also incorporated the installation of £10 million of motorway communication systems and £7 million of services diversions. In addition, significant online widening, from two lanes to three of the existing motorway, plus widening exercises at the M1 Junction, M2 Junction and A12 were prominent components of this complex civil engineering project.

### Outputs & Benefits

- Cost savings:** £25 million saving to the local economy by opening the Broadway Underpass 13 months early
- Four schemes:** 1. M1 A12 Westlink widening, 2. Antrim Hospital Junction 7, 3. M2 widening, 4. Motorway Communications and central barrier upgrade
- Keeping traffic moving:** Construction was completed with traffic management procedures in place, maintaining 130,000 vehicles per day
- Community engagement:** Contributed £5000 plus plant and labour to construct a playground at St James Park
- Responsible constructor:** Collaborated with Ulster Wildlife Trust to limit disruption to Bog Meadows nature reserve



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

+44 (0) 28 9268 9500

info@graham.co.uk

graham.co.uk

**GRAHAM**