

A6 Randalstown to Castledawson Dualling Scheme

A6 Dualling Scheme unlocks strategic route

£135m

/ Project value

October 2016

/ The project commenced

April 2021

/ Scheduled completion

Notable for the achievement of 26% cost savings (£42m) at the Early Contractor Involvement (ECI) stage, we are responsible for the completion of the A6 Randalstown – Castledawson Dualling Scheme as part of a Joint Venture (JV) with Farrans. Valued at £135m, the four-and-a-half-year project involves the design and construction of 14.7km of dual carriageway through a predominantly rural landscape and the extension of the M22 north. As traffic levels continue to grow towards 20,000 vpd, this vital highways infrastructure project will improve road safety, reduce journey times and congestion on this strategically important North West transport corridor, connecting Belfast and Derry/Londonderry.

The Brief

Under an 'NEC contract' (Option E, B and C for Phase 1 and 2), the Department for Infrastructure (DfI) has tasked the GRAHAM/Farrans JV to design and construct a dual carriageway from Randalstown to Toome and from Toome to Castledawson. The brief also included the provision to provide a dual carriageway (D2AP) standard road between the western end of the M22 Motorway at Randalstown and the Castledawson Roundabout.



“With traffic levels continuing to grow, a dual carriageway will improve safety, reduce congestion and improve journey times on this vital route,”

Danny Kennedy
Transport Minister

“GRAHAM/Farrans will assist in the development to a ‘shovel ready’ stage in readiness for construction. This A6 Dualling Scheme is a significant project that will remove a major bottleneck and enhance this strategically important route to the North West, which links Londonderry and Belfast,”

Danny Kennedy
Transport Minister

The challenges

Poor ground conditions (peat), reclaimed ground and a number of known sites of cultural/heritage significance, have presented a complex risk to the project. Magnifying the challenge further, the alignment is within Whooper Swan feeding lands and in close proximity to Lough Beg and Lough Neagh (RAMSAR, ASSI and SPA), which, in accordance with the Environmental Statement, prohibited major earthworks and drainage works for six months of the year. To mitigate the risks associated with poor ground and ground water, we employed ground improvement techniques, including ‘dig and replace’, the installation of band drains and surcharging over 3km of the route.

GRAHAM's solution

Since breaking ground in summer 2017, significant progress has been made by the GRAHAM/Farrans JV with work on 15 of 21 structures under way, six borrow pits are in operation, a considerable amount of earthworks are complete and the laying of pavement has commenced. The successful implementation of ECI on the A6 project has enabled our expert team to contribute to the development of the design and provided us with the opportunity to consider construction issues at an early stage. Importantly, it also created the conditions for the delivery of significant cost savings, resulting from the exploitation of a range of efficiency avenues, including earthworks (securing borrow pits with local landowner agreements to win Class 2 material), drainage/culverts (VE opportunities in shortening/combining/straightening culverts), structures (designed as a family of structures, elimination of retaining walls) and programme (reduction of overall programme as a result of ECI logic development).

Outputs & Benefits

- / **Scope of Works:** A 7.3km long dual carriageway (Randalstown to Toome), a 7.4km long dual carriageway (Toome to Castledawson) and over 8km of side roads across both zones. There are 21 major structures including five compact grade separated junctions, Moyola River Bridge, pedestrian footbridges, farm accommodation overbridges and underpasses. Also, there are 31 mainline and 14 sideroads culverts, over 30km of mainline drainage and accommodation works
- / **Technical Working Groups:** TWGs have been established to address Whooper Swan mitigation measures, geotechnical design, programme, alignment and accommodation works. Partnering workshops are also conducted
- / **Lane Closures:** Instead of long-term lane closures to complete online widening and improvement, we have introduced a series of full weekend closures, resulting in better productivity and enhancing safety for the travelling public during delivery



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