

Edinburgh Trams Network, Edinburgh

Ground-breaking tram track transports Edinburgh into the future

£23.3m

/ Project value

February 2010

/ The build commenced

January 2013

/ The build was completed

Identifying over £1 million in savings through innovative design recommendations, while delivering over 457,000 'man-hours', our technical expertise as a key contractor for the Edinburgh Trams Network has provided a new solution to the public transport needs of "this growing city". The expansive £23.3 million project, completed within a 35-month timeframe, involved the construction of 1200m of tram track, six structures and two tram stops.

The Brief

In a bid to deliver "the best possible transport experience" for its customers, fully accountable to the needs of Edinburgh's taxpayers, Transport Initiatives Edinburgh cost-effectively aspired to revolutionise public transport in the city through the construction of a 14-kilometre tram line between York Place in New Town and Edinburgh Airport.



“During the course of the Project, which has been the subject of many contractual, affordability and scope issues (between the prime contractor and the City of Edinburgh Council), GRAHAM has shown a flexible and positive approach in order to achieve our overall objective of delivering a tram network to the City of Edinburgh,”

commented a Transport Initiatives Edinburgh Spokesperson

The challenges

Having been awarded this project as a principle sub-contractor, as opposed to the prime contractor, our team had to consistently overcome indirect delays as a consequence of other package interruptions. Exemplified in our critical path item, namely the construction of the Murrayfield Tramstop, where a key stakeholder was unable to complete their works, we had to creatively re-sequence our activity phasing and create temporary access to the Tramstop to ensure continuity. Furthermore, the complexity of works required, including drainage, ducting and piling, had to be completed in close proximity to live Network Rail lines.

GRAHAM's solution

Despite projected costs for the overall scheme spiralling to over £1bn, our “flexible and positive” approach was commended by the client in the construction of various structures, and trackwork, starting from Haymarket Station and finishing at Murrayfield Stadium. The £23.3m project required the construction of six structures, inclusive of bridges, underpasses and viaducts, two tram stops and 1,200m of tram track. Elements of the works included drainage and reinforced concrete structures and temporary works consisting of sheet piling and soil nailing. We identified £1m of savings by advocating a Soil Mix Column Design through a contaminated area as opposed to a ‘Dig and Replace’ method. We also reduced disruptive and local possessions by pushing for Centre Overhead Line Equipment (OHLEs) rather than offset, and employed only three rail possessions through effective planning and the implementation of ‘Rules of the Route’.

Outputs & Benefits

- / **Commended Delivery:** Praised for our “flexible and positive” approach by the client
- / **Identifying Savings:** We identified £1 million of savings by advocating a Soil Mix Column Design
- / **Health and Safety Focus:** Zero reportable accidents across 457,000 “man-hours”
- / **Effective Planning:** Only three rail possessions utilised for all of the works
- / **Integrated Team:** Coordinated interfaces through a team consisting of a Track Systems Manager, Utilities Manager, Civils Contractor Manager and a Design Manager



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

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GRAHAM